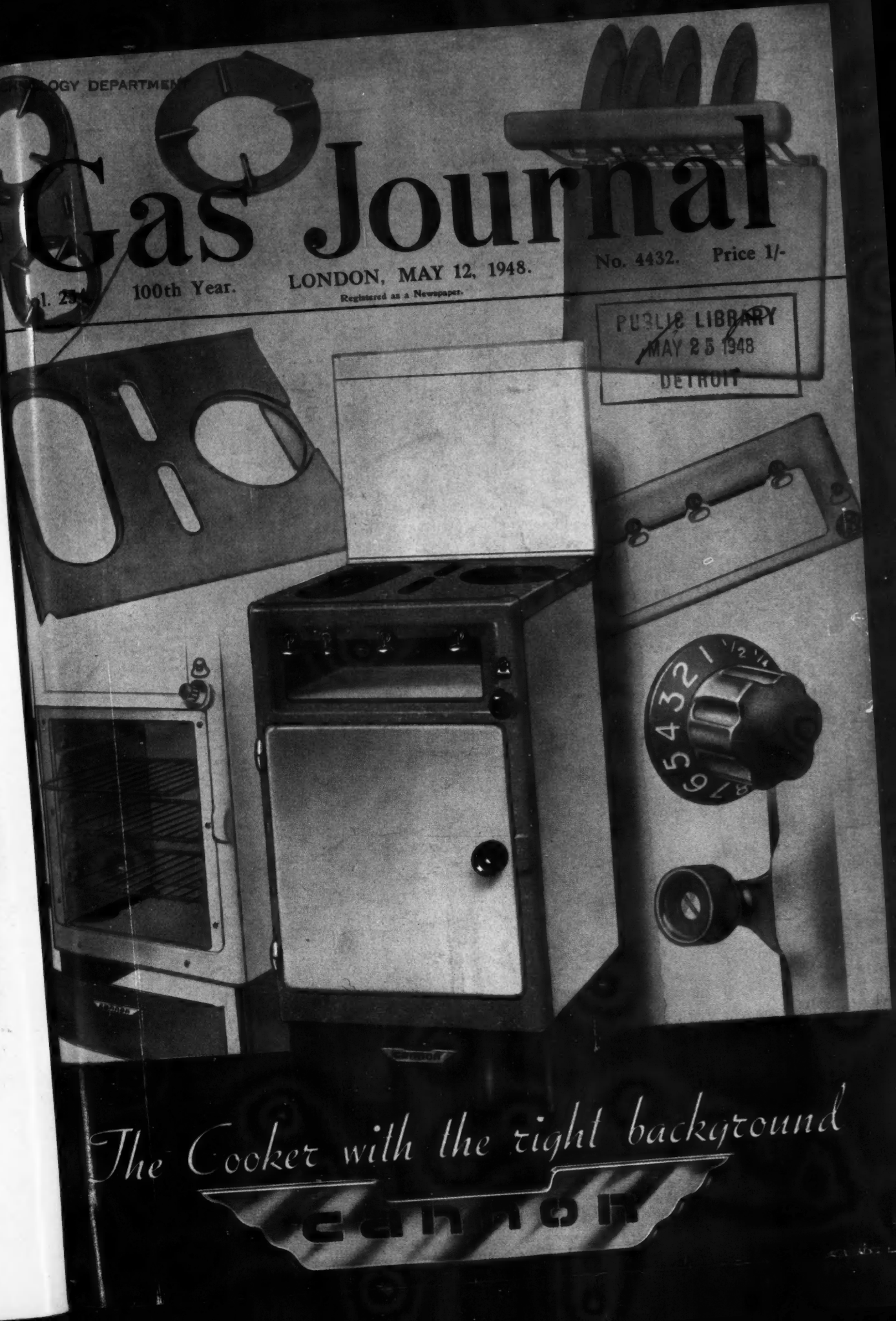
...OGY DEPARTMENT

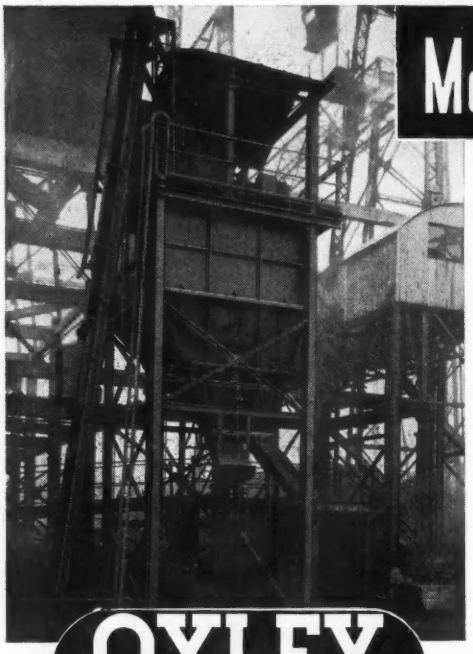
Gas Journal

Vol. 25[illegible] 100th Year. LONDON, MAY 12, 1948. No. 4432. Price 1/-

Registered as a Newspaper.

PUBLIC LIBRARY
MAY 25 1948
DETROIT





Mechanical Handling Plant

for

COAL, COKE OR OTHER BULK MATERIALS

We are Specialists in all Types of Gasworks Plant

ELEVATORS AND CONVEYORS

•

WELDED STEEL PURIFIERS AND GASHOLDERS

•

We can offer expert advice, a complete design service and can undertake a very wide variety of welded constructional work.

The illustration shows a mild steel welded ash bunker, of 18 tons capacity, fitted with radial cut-off doors. The skip bucket is of 7 cwt. capacity with electrical timing gear for automatic tipping and return. Bucket travel speed is 60 ft. per minute.

OXLEY ENGINEERING CO. LTD.

OXLEY ENGINEERING CO. LTD., HUNSLET, LEEDS 10

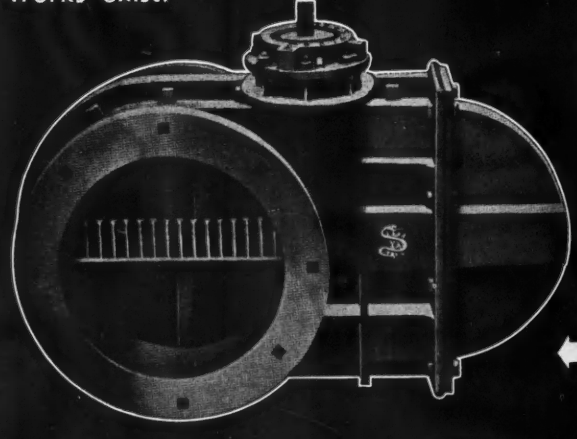
Telephone: LEEDS 32521 *Telegrams:* OXBROS, LEEDS

London Office: WINCHESTER HOUSE, OLD BROAD STREET, LONDON, E.C. 2
Telephone: London Wall 3731 *Telegrams:* Asbengpro, Stock, London

W 77

14,000 GAS VALVES

This is the number of DONKIN VALVES sold ANNUALLY. Unmistakable evidence of their popularity and reliability. They are in use in all parts of the World where Gas Works exist.



High Pressure Valve for pressures up to 100 lbs.

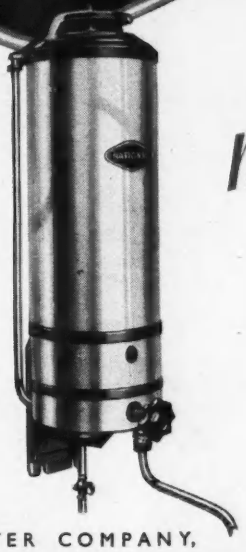
The Standard Donkin Rack and Pinion Low Pressure Valve which has been in general use for a great number of years.

THE BRYAN DONKIN CO. LTD.

GAS WORKS PLANT ENGINEERS · CHESTERFIELD

HARD WATER AREAS

NEED NATIONAL WATER HEATERS



Minimum Maintenance !

NATIONAL GAS WATER HEATER COMPANY, WARWICK ROAD, GREET, BIRMINGHAM, 11

GEORGE Glovers

Dependable Year-in Year-out

RANELAGH PRE-PAYMENT METERS

RANELAGH WORKS 122, KING'S Rd CHELSEA S.W.3.

George Glover & Co. Ltd.,

Building the Post-war World . . .

Work in progress on a penicillin factory we have recently built in the North of England.

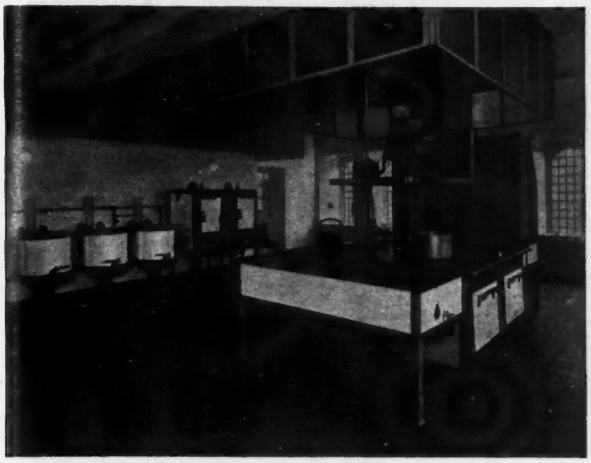
TAYLOR WOODROW

CONTRACTS RECENTLY COMPLETED AND IN HAND • SEA DEFENCE WORKS • OIL PIPELINES
AERODROMES • UNDERGROUND STORAGE TANKS • POWER STATIONS • DEEP SEWERS (Tunnel and Open Cuts)
RAILWAY SIDINGS • OPEN CAST COAL

TAYLOR WOODROW CONSTRUCTION LTD. *Head Office and Works:* RUISLIP ROAD, SOUTHALL MIDDLESEX
'Phone: Waxlow 2366. *'Grams:* Taywood, Southall. *Code:* Bentley's Second. *London Office:* 10 PARK STREET, W.1. *'Phone:* Grosvenor 4617

BENHAM

Gas and Steam Cooking Appliances



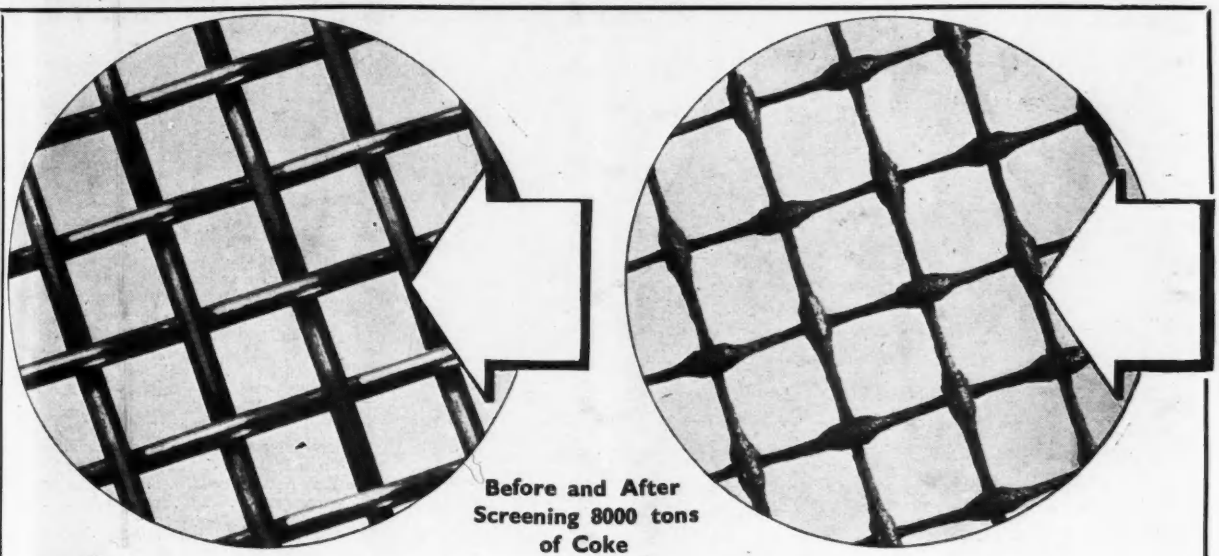
Part of the all-gas kitchen equipment of the King's School, Canterbury. Benham Gas and Steam cooking apparatus is also installed at St. Paul's School, London; Girton, Gonville and Caius Colleges, Cambs. In hand are Balliol, and Pembroke Colleges, Oxon, etc.

BENHAM SERVICE TO GAS Undertakings includes the manufacture and supply of gas and steam cooking and service appliances, the planning of kitchens and kitchen ventilation, also improvements to existing installations. Manufacturers of Hercules gas and steam heated dishwashing machines.

Chef Trainees — The Army Catering Corps Training Centre, Aldershot; The Welsh School of Catering, Cardiff — each have Benham Cooking Appliances. In hand, for the Gas Light and Coke Company, Hotel School for the Westminster Technical Institute.

BENHAM & SONS Ltd., 66 Wigmore St.
LONDON, W.1

BIRMINGHAM · BRIGHTON . BOURNEMOUTH · CARDIFF
MANCHESTER · GLASGOW · DUBLIN



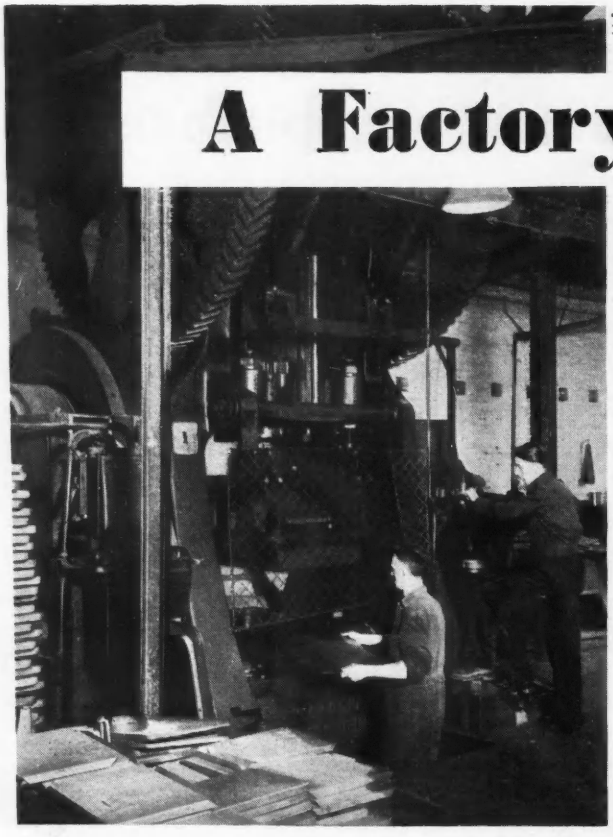
Before and After Screening 8000 tons of Coke

The supreme test of Screening....

The "HARCO" Special Hard Quality Steel Wire Screens are woven from Steel made to our own special analysis in order to obtain the utmost resistance to abrasion and fracture from fatigue.

In any mesh or gauge of Wire. **Catalogue G.J. 269 sent on request.**

G·A·HARVEY & Co (LONDON) LTD WOOLWICH RD LONDON S.E.7.



A Factory at Work

The vast amount of engineering skill and experience available to this large Rainhill factory and the modern manufacturing equipment in use are responsible for the technical supremacy of the "Newhome" gas cooker.

STOVES
LIMITED
RAINHILL LIVERPOOL

89-200

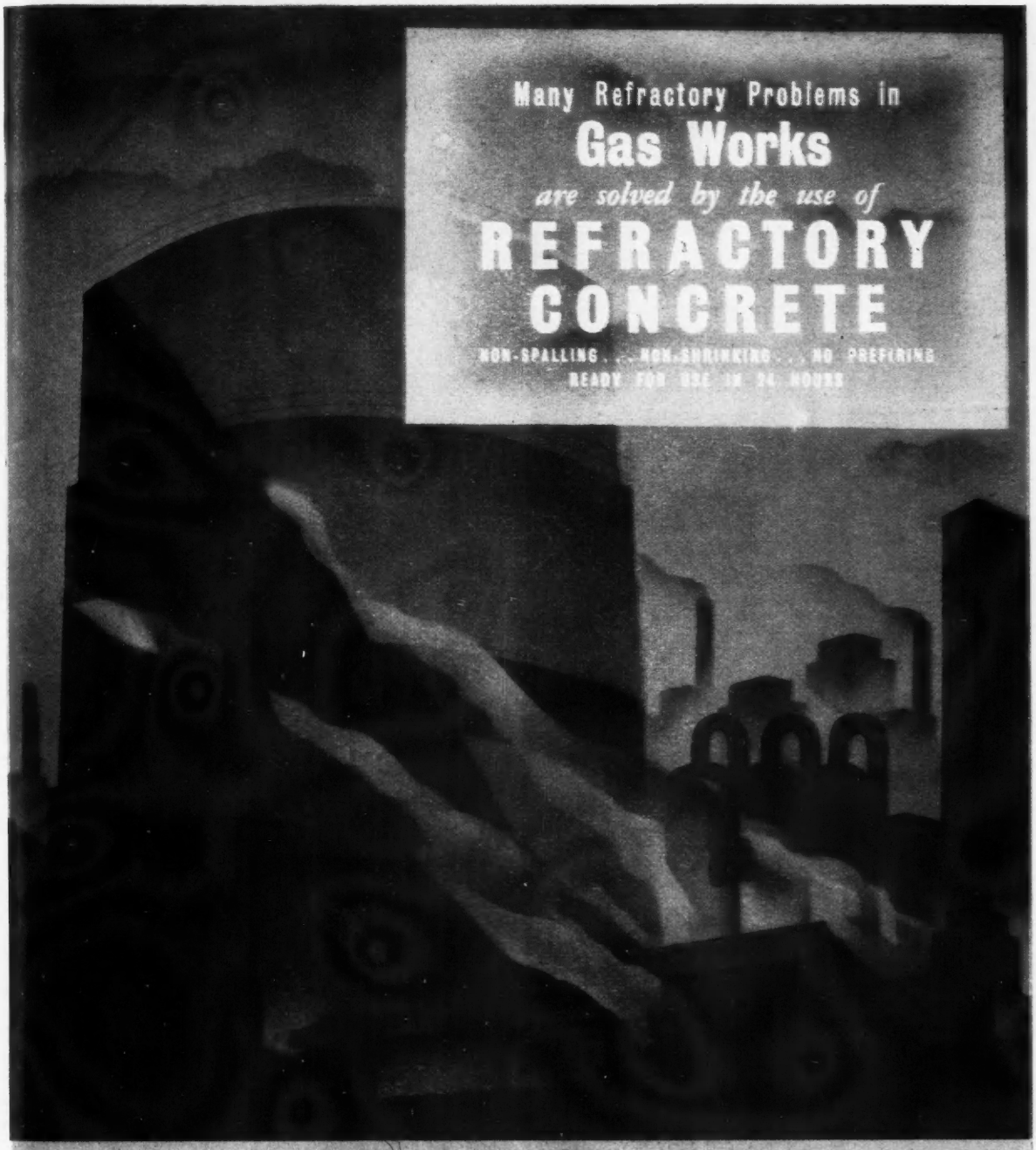
Plumber's Paradise...

Once upon a time there was a plumber who had wrestled and cursed (shocking but true!) with soldered joints for most of his life. In fact life was a mild form of Hades for him — a perpetual chase up with his work at one end and making good deficiencies at the other. Then he discovered "Securex". "Pinch me", he said, "This must be heaven—it's too good to be true. Just to think — TO THINK — of a joint that's rust-proof and fur-proof, that can be assembled in TWO MINUTES and which will stay put under all temperatures and pressures . . . and Cheaper, too . ."

So his wife pinched him, but he forgave her for he wasn't dead—not a bit! And he's still very much alive and very, very pleased with life now that he's caught up with all his work.

SECUREX
SOLDERLESS COMPRESSION JOINTS

Sole Manufacturers: JAMES H. LAMONT & CO. LTD.,
ENGINEERS — BRASSFOUNDERS.
Gylemuir Works, Corstorphine, Edinburgh 12, Scotland.
Telephone: Corstorphine 66641-2. Telegrams: "Solderless, Edinburgh."
LONDON OFFICE: Norfolk House,
Laurence Pountney Hill, E.C.4.
Telephone: Mansion House 5700, Telegrams: "Yutaka Cannon, LONDON"


Many Refractory Problems in
Gas Works
are solved by the use of
REFRACTORY
CONCRETE
NON-SPALLING . . . NON-SHRINKING . . . NO PREFIRING
READY FOR USE IN 24 HOURS

Used extensively for producer linings and charge hole blocks, brickwork mortar, retort setting, flues, quenching floors, coke shoots, top paving, carburetter head tiles, dampers, special shapes, and general repairs and patching for the following reasons: It is non-spalling, reduces joints to a minimum, is adaptable to any size or shape and combines low contraction with long life. Write for descriptive and technical literature dealing with refractory concrete or send your enquiries to our Technical Service section whose advice is freely placed at your disposal.

CIMENT FONDU
ALUMINOUS CEMENT

Issued by LAFARGE ALUMINOUS CEMENT CO. LTD., 73 BROOK ST., LONDON, W.1. *Telephone:* MAYfair 8546

3 - 933

. . . Stanley Spencer attained dual distinction by making the first flight in a navigable aircraft over London and also taking aerial photographs as he steered his frail machine from Sydenham to Harrow.

The year that witnessed this start in a great development also saw the first manufacture of MANOX OXIDE. Like aviation, MANOX OXIDE has made great headway since those early days. Now, a substantial part of the whole gas industry's ever-increasing output is purified with the assistance of MANOX OXIDE.

3

HARDMAN & HOLDEN LIMITED

INCORPORATING MANCHESTER OXIDE CO LTD

MANOX HOUSE · MILES PLATTING · MANCHESTER · 10

TELEPHONES: COLLYHURST 1551 (11 LINES) • TELEGRAMS: OXIDE MANCHESTER

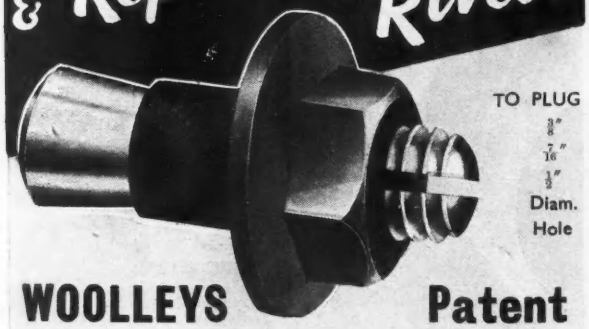
Non-ferrous metals in all forms for all purposes

ICI

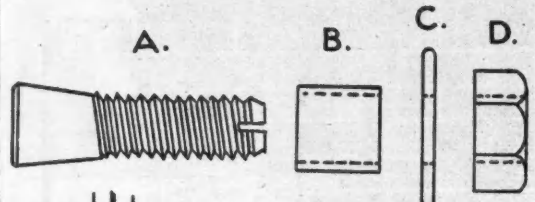
IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, S.W.1

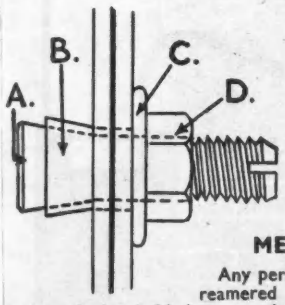
M.119

For Patching Repairs & Replacing Loose Rivets



WOOLLEYS Patent GASHOLDER REPAIR BOLTS





A. Taper Headed Screw, nicked for Turnscrew to prevent bolt turning whilst fixing.

B. Annealed Tubular Sleeve, sliding fit over thread of screw.

C. Washer, also sliding fit over thread of screw.

D. Nut for forcing the tubular sleeve over the taper head of bolt, making an effective metal to metal joint.

METHOD OF FIXING

Any perforation of the Gasholder plate is reamered out ⅜", 7/16" or ½" diameter to admit the head of bolt passing through. We recommend reamering, rather than drilling, and the reamer, if well smeared with tallow, not only makes a perfectly round hole but effectually seals the gas.

The bolts are assembled ready for insertion in the hole when the reamer is withdrawn, the bolt being held in position with a turnscrew whilst the nut is screwed up. By this means the taper head of the bolt is drawn into the sleeve, expanding it to a tight fit in the plate.

No Jointing material or grummets are necessary other than the joint between the plates.

It is an advantage where sheets are very thin, due to corrosion, to split the ferrules down about ⅛" crosswise, and also when plugging the large size holes, so that the ferrule will expand more easily.

We are sole agents and have supplied many thousands which have proved very satisfactory in use.

NICHOLSON & WEST LTD

REGISTERED

3-15A GAOL LANE
HALIFAX
YORKSHIRE

TOOLDOM

Telephone:-
HALIFAX 3224
Telegrams:-
"TOOLS, HALIFAX"

N.W.2

May

The British Industries Fair opens in London and Birmingham early in May. This great display reflects the skill and resourcefulness of the people of this country in providing the exports so essential to our national well-being. Many exhibitors enjoying an international reputation can recall their first steps and not a few the aid and support received from the Midland Bank. Over a century ago this Bank began as a local undertaking in Birmingham, side by side with other examples of early enterprise. To-day the Bank is as ready to meet the needs of those whose requirements are modest as it is of those of the great industrialists, and from stands at the exhibition offers its services to all having need of them.

MIDLAND BANK LIMITED

lasting
protection
begins with

"BITUMASTIC"

"Bitumastic" Solutions and Enamels, "Bitumastic" Super Service Black Solution, "Bituplastic," and "Bitublack" Smoke Stack Solution are only some of the protective coatings manufactured by Wailes Dove Bitumastic Ltd. Write today for descriptive literature.

WAILES DOVE BITUMASTIC LIMITED · HEBBURN · CO. DURHAM

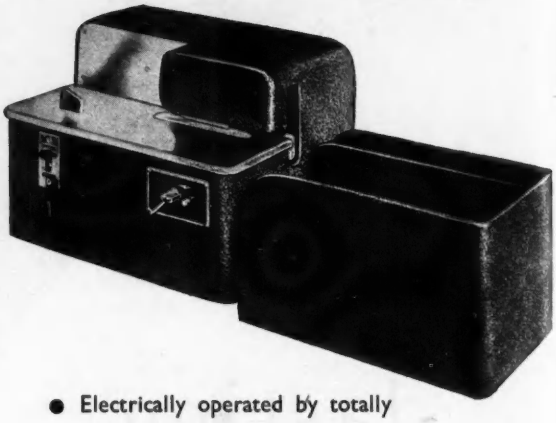
Safety First!

★ ELIMINATE FIRE AND EXPLOSION RISKS DUE TO TOOL SPARKS by using
TELCON
Beryllium Copper Cu-Be 250 Non-Sparking
SAFETY TOOLS

A complete range of hand tools is available to meet all requirements and special tools can be made to order. Write for details

Manufactured by
THE TELEGRAPH CONSTRUCTION & MAINTENANCE Co. Ltd.
Head Office: 22 OLD BROAD STREET, LONDON, E.C.2
Distributors for Great Britain:
BERYLLIUM & COPPER ALLOYS LTD.
47, Victoria St., London, S.W.1. *Telephone: ABBey 6259*

You can have **500 letters** or more **opened** and ready for attention two minutes after your post-room begins work by using this **I.C.C. LETTER-OPENING MACHINE**



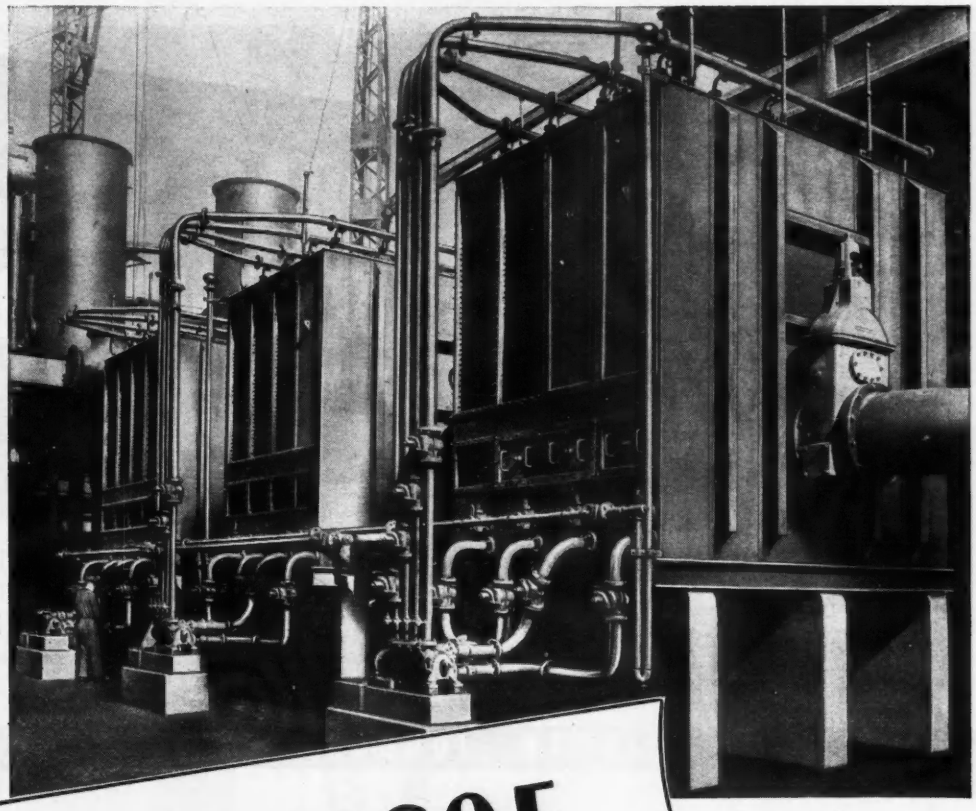
- Electrically operated by totally enclosed motor.
- Rapid adjustment for large or small mail.
- Self-sharpening rotary cutters, safe automatic feed.
- Workable by the youngest junior.
- English-made; in bronze-green with chromium fittings.

INTERNATIONAL COIN COUNTING MACHINE COMPANY LIMITED
ALEXANDRA RD., ENFIELD

Tel : Howard 1886 Telegrams : Intercount, Enfield

Makers of letter-opening, envelope-sealing, coin-counting and token-counting machines.

Visit Stand No. F.45 B.I.F. Olympia



Constructional view of a large capacity 12 bay Whessoe Static Scrubber for ammonia extraction, supplied to the South Metropolitan Gas Company.

THE WHESSOE MULTI-STAGE STATIC SCRUBBER

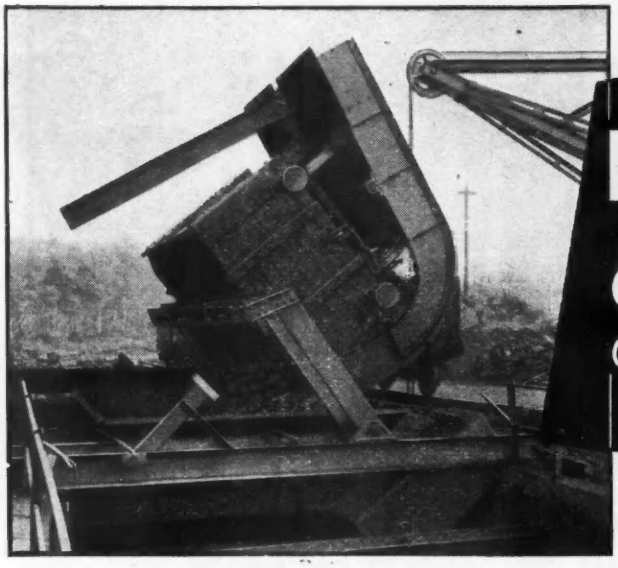
FEATURES

1. **Wooden grid filling, providing a washing surface with a high degree of sub-division and uniformity.**
2. **Adequate irrigation of this filling by means of high efficiency mono-bloc centrifugal pumps, providing the simplest and most reliable method of liquid recirculation.**
3. **Guaranteed performance, not merely of ammonia or naphthalene removal, but of corresponding enrichment of washing medium.**

WHESSOE DARLINGTON

WHESSOE LIMITED DARLINGTON

HEAD OFFICE AND WORKS, DARLINGTON TEL. DARLINGTON 5234
LONDON, 25 VICTORIA STREET, S.W.1 TEL. ABBEY 3881



Side Discharge Wagon Tippler handling
12 ton Wagons (S. & H. System).

DRAG SCRAPER & ENGINEERING COMPANY • LIMITED

D·S·E

Designers and Suppliers of SPECIAL Mechanical Handling Plant for Conveying, Storing and Reclaiming Bulk Material.

Proposals prepared to meet individual requirements.

14-18 HIGH HOLBORN, LONDON, W.C.1

Phone: Chancery 8521-8522
Grams: Deessee, Holb. London.

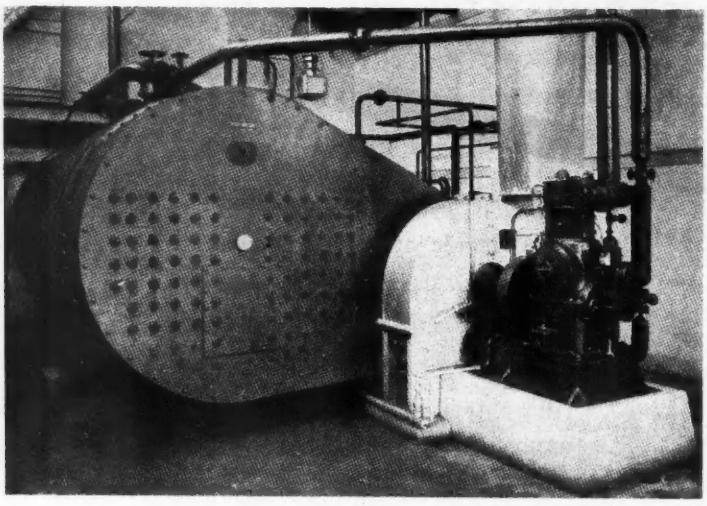
SISSON STEAM ENGINES

FOR LONG PERIOD CONTINUOUS RUNNING

HIGH SPEED
TOTALLY ENCLOSED
MECHANICAL LUBRICATION
SPEED ADJUSTMENT GEAR
DUST EXCLUDING FITTINGS (if required)

■

EXCEPTIONALLY LOW STEAM CONSUMPTION UNDER VARYING LOADS OBTAINED BY SISSON PATENT AUTOMATIC CRANK-SHAFT GOVERNOR



SISSON ENGINE DIRECT COUPLED TO FAN FOR SPENCER-BONECOURT WASTE HEAT BOILER

FOR DRIVING—
EXHAUSTERS,
BOOSTERS,
DYNAMOS,
FANS,
PUMPS,
SKIP HOISTS,
LIFTS,
C.W.G. PLANT
BENZOLE AND AMMONIA WASHER ELEVATORS.
BY DIRECT COUPLING, CHAIN, BELT OR GEAR

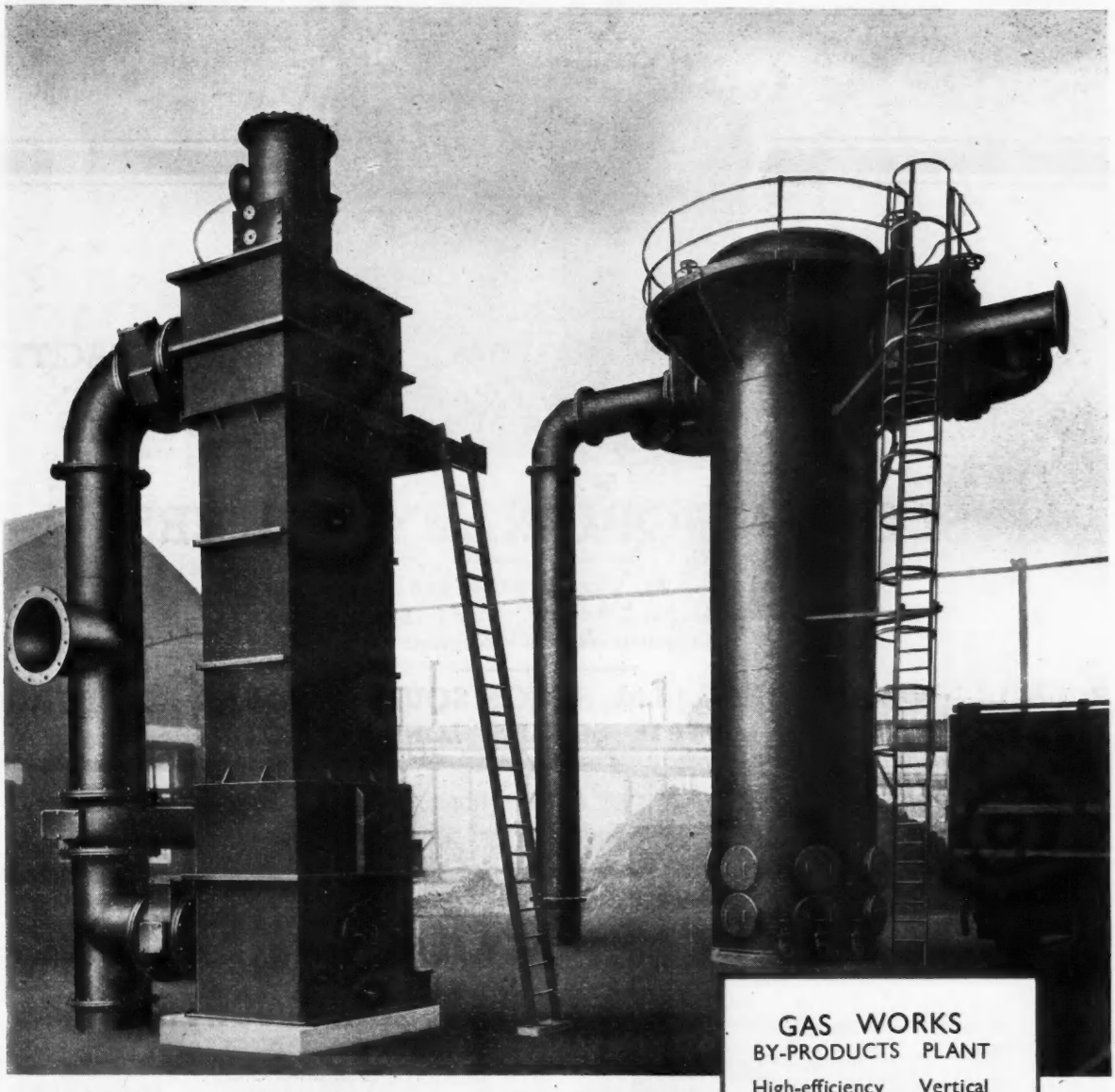
■

SISSON PATENT AUTOMATIC CONTROL GEAR CAN BE COMBINED WITH ELEVATOR AND WINCH ENGINES

W. SISSON & Co. Ltd., GLOUCESTER, ENGLAND.

Telephones: 2295 & 6 Gloucester

Telegrams: "Sisson, Gloucester"



ELECTRO DETARRERS & CONDENSERS

Our photograph shows a Simon-Carves plate type electro-detarrer and a high velocity multi-pass vertical tube condenser under erection at the Salthouse Gas Works, Barrow-in-Furness. This installation will have a capacity of 3 million cu. ft. per day.

SIMON-CARVES LIMITED
CHEADLE HEATH · STOCKPORT
Telephone: Gatley 3600 Telegrams: "Simcar" Manchester.

GAS WORKS
BY-PRODUCTS PLANT

High-efficiency Vertical and Horizontal Tube Condensers
Electro de-tarring Plant
Static Ammonia Washers
Tar and Liquor Separating and Decanting Systems
Automatic Crude Benzole and Rectification Plant
Concentrated Ammonia Liquor Plant
Heat Exchange Equipment for Oil and Liquor Coolers
Gas Heaters and Storage Tanks

SIMON ENGINEERING GROUP

I.G.E. AND HIGH CAPACITY

SLOT AND ORDINARY METERS

Nothing But the Best Materials and Workmanship Used in Their Manufacture
Repairs — Parts Supplied

R. LAIDLAW & SON (Edin.) Ltd., SIMON SQUARE WORKS, EDINBURGH
8/9, LUDGATE SQUARE, LONDON, E.C.4

Ether-Wheelco "CAPACITROL"
Automatic Temperature Controller
Send for descriptive List
No. 447
B. I. F. Castle Bromwich.
See our exhibit on
STAND No. C. 700

ETHER-WHEELCO
ELECTRONIC CONTROLS

Made in England under the patents of the Wheelco Instrument Co. of Chicago.

Over 50,000 of these instruments have been sold and are in use all over the world.

The illustration shows the "CAPACITROL" Automatic Temperature Controller capable of controlling gas fired furnaces and apparatus utilising the On-Off or By-Pass system of control.

Other types are made giving two position and proportional control, these are known as the "MULTRONIC" and "PROPORTIONAL CAPACITROL".

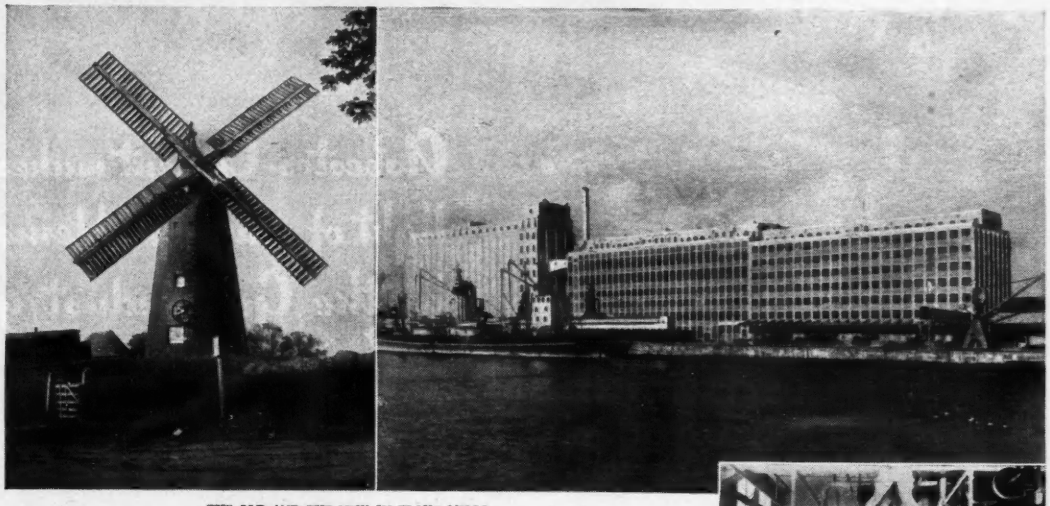
All these instruments utilise electronics to automatically control temperatures with the speed of light, great accuracy and no interference with the measuring system. They are faster, simpler and more accurate than the Chopper Bar type formerly used.

ETHER LTD.

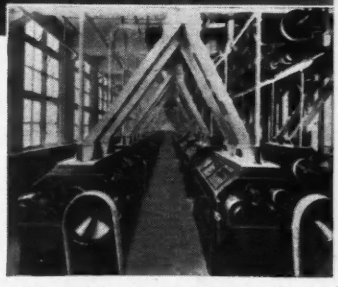
TYBURN ROAD · ERDINGTON · BIRMINGHAM
Telephone : East 0276 - 7.

Holdens

There is a difference

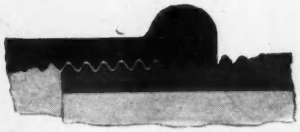


THE OLD AND THE NEW IN FLOUR MILLS

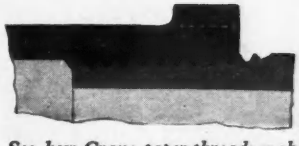


Photographs by courtesy of Messrs. Spillers, Ltd., and Messrs. Henry Simon, Ltd.

And there is also a difference between Crane pipe fittings and other good quality fittings, for Crane fittings have TAPER-TO-TAPER THREADS which, by making solid metal-to-metal contact throughout their entire length, ensure stronger joints free from corrosion.



Many parallel threads doing no work although wrench tight. This defect starts corrosion.

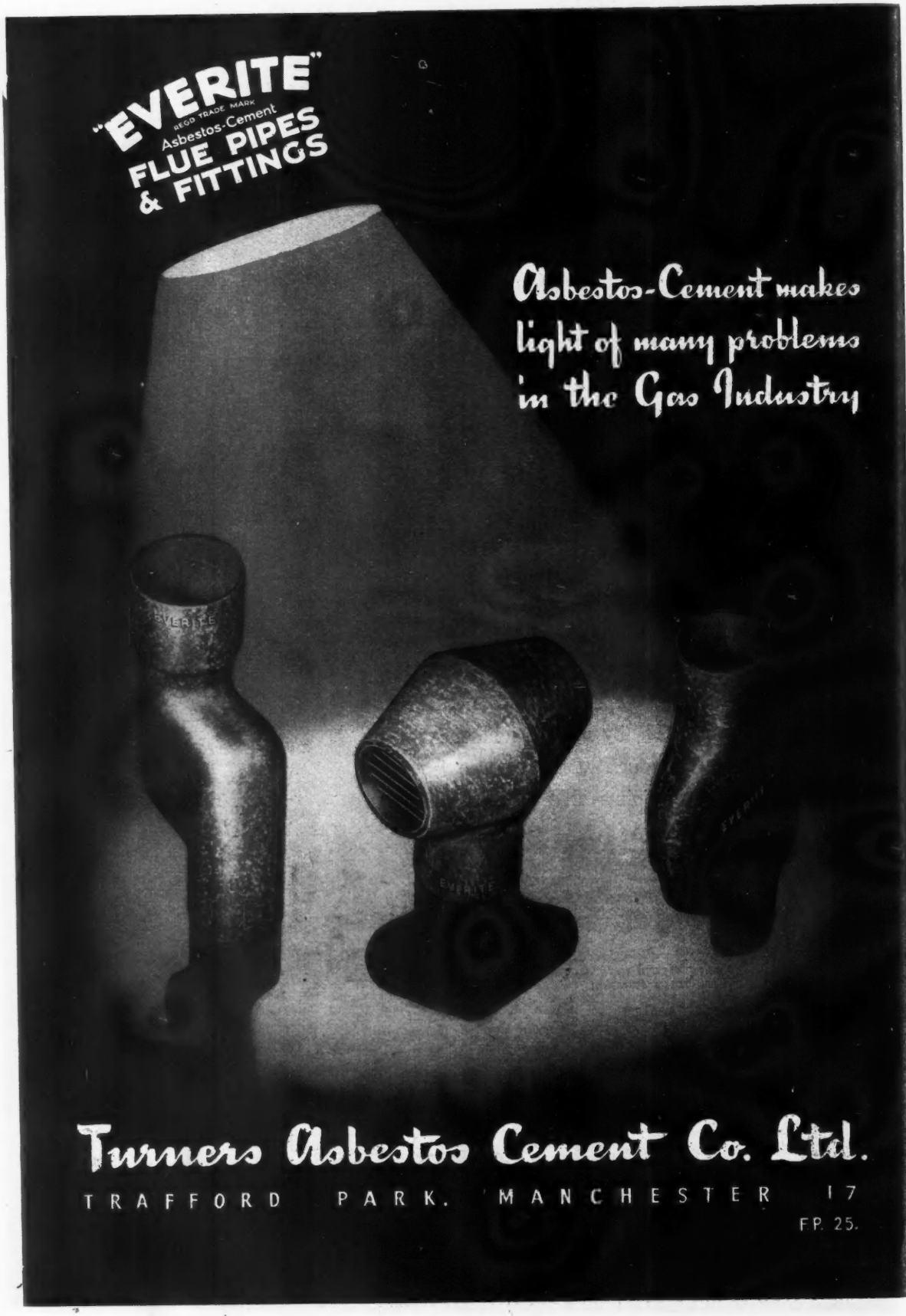


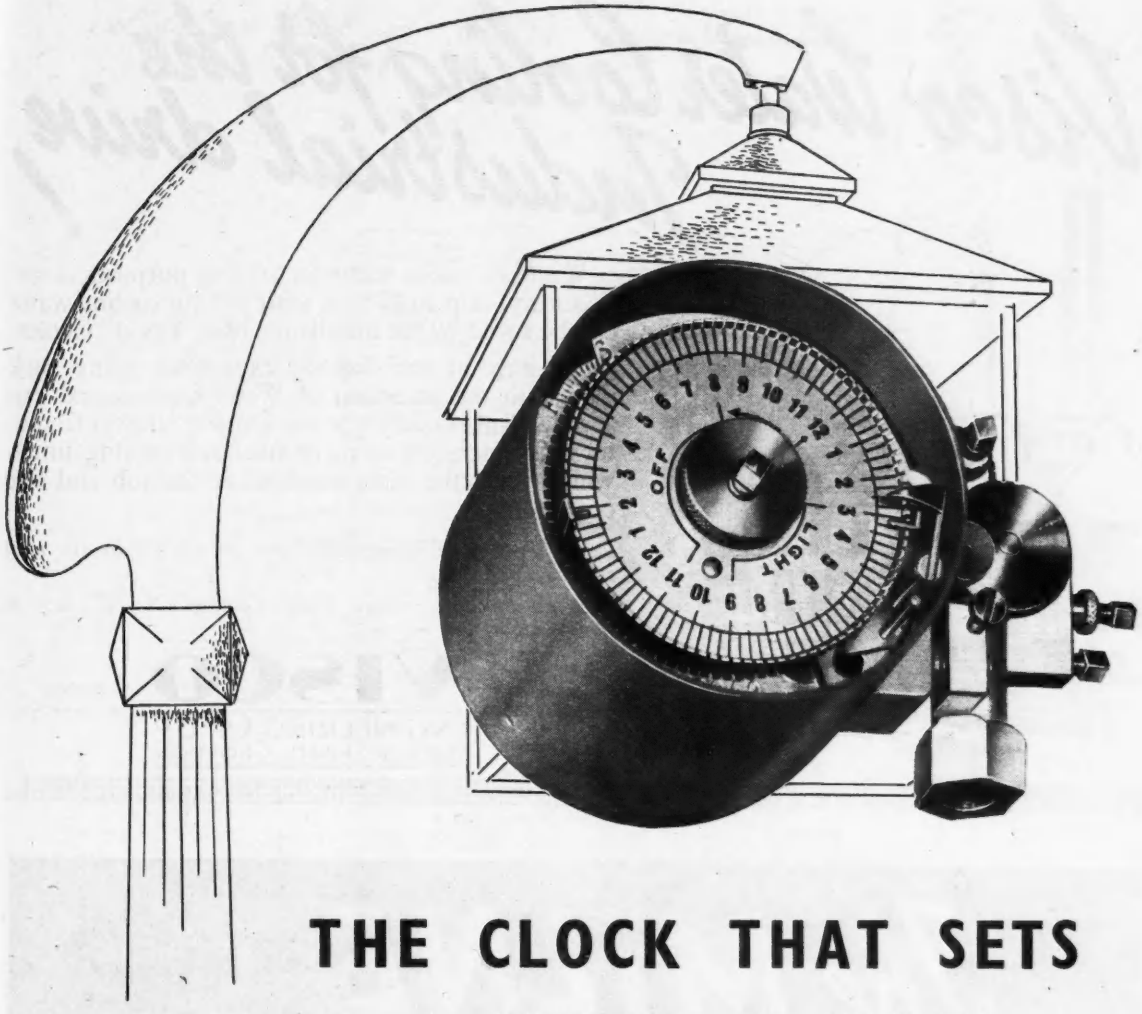
See how Crane taper threads make perfect contact. Note the extra metal wher threads are cut.

CRANE

VALVES, FITTINGS AND HEATING EQUIPMENT

CRANE LTD., LEMAN STREET, LONDON, E.1. Branches : Brentford - Birmingham - Bristol - Glasgow - Manchester.


"EVERITE"
REGD TRADE MARK
Asbestos-Cement
FLUE PIPES
& FITTINGS
Asbestos-Cement makes light of many problems in the Gas Industry
Turners Asbestos Cement Co. Ltd.
TRAFFORD PARK. MANCHESTER 17
FP. 25.



THE CLOCK THAT SETS WITH A CLICK

** Perfect time-keeping in all weathers. * Quickest to set. * Can be operated for testing purposes without disturbing the actual setting of the dial pointers. * Easiest to read. * Works in any position. * Can be removed from cock by winding key.*

In the Kingsland Controller the edge of the dial is notched each quarter hour. Dial pointers click in each slot as moved, so that besides being CLEARLY VISIBLE the setting is AUDIBLE and DETECTABLE BY TOUCH. Good visibility is essential always. Audibility is an advantage at night or in fog or darkness.

THE KINGSLAND CONTROLLER

"The clock that sets with a click"

THE GAS METER CO., LTD., 238 Kingsland Road, London, E.2

CMGM 11

Visco Water Cooling for the Industrial drive!

Waste of mains water for cooling purposes is unnecessary. Up to 97% of your bill for cooling water can be saved by the installation of a "VISCO" Cooler.

We have at our disposal experience going back almost to the inception of Water Coolers and can supply plant of every type and any size: timber frame-towers, concrete towers, or steelshell cooling units, whichever is the most suitable for the job and site conditions.

Let us know your requirements, and we will advise the most suitable equipment.

Our new brochure "Visco Water Cooling" No. 471 will be sent on request.

Telephones: CROydon 4181-4 & 2471

VISCO
ENGINEERING CO. LTD
STAFFORD ROAD. CROYDON.

Telegrams: "Curtmit, Croydon"

MILNE'S METERS LTD, EDINBURGH & LEEDS

Life is full of little uncertainties —

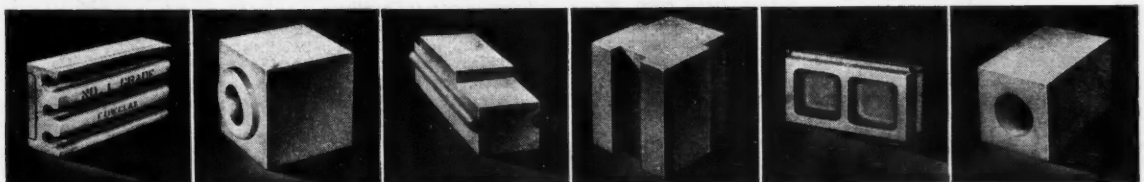
— but there's never any doubt about GIBBONS!

GIBBONS

First for Refractories since 1843

Gibbons have concentrated on refractory making for 105 years and today they are recognised as a leading authority on all questions of production and application of this highly technical industry.

An unrivalled Engineering and Consulting Service, well primed with the latest information, is at your disposal and welcomes an opportunity to help.



FIRE BRICK | ALUMINOUS GRADE | SILICA | H.T.I | SILICON CARBIDE | SILLIMANITE

M-W.110

Gibbons (Dudley) Ltd., Dibdale Works, Dudley, Worcs.

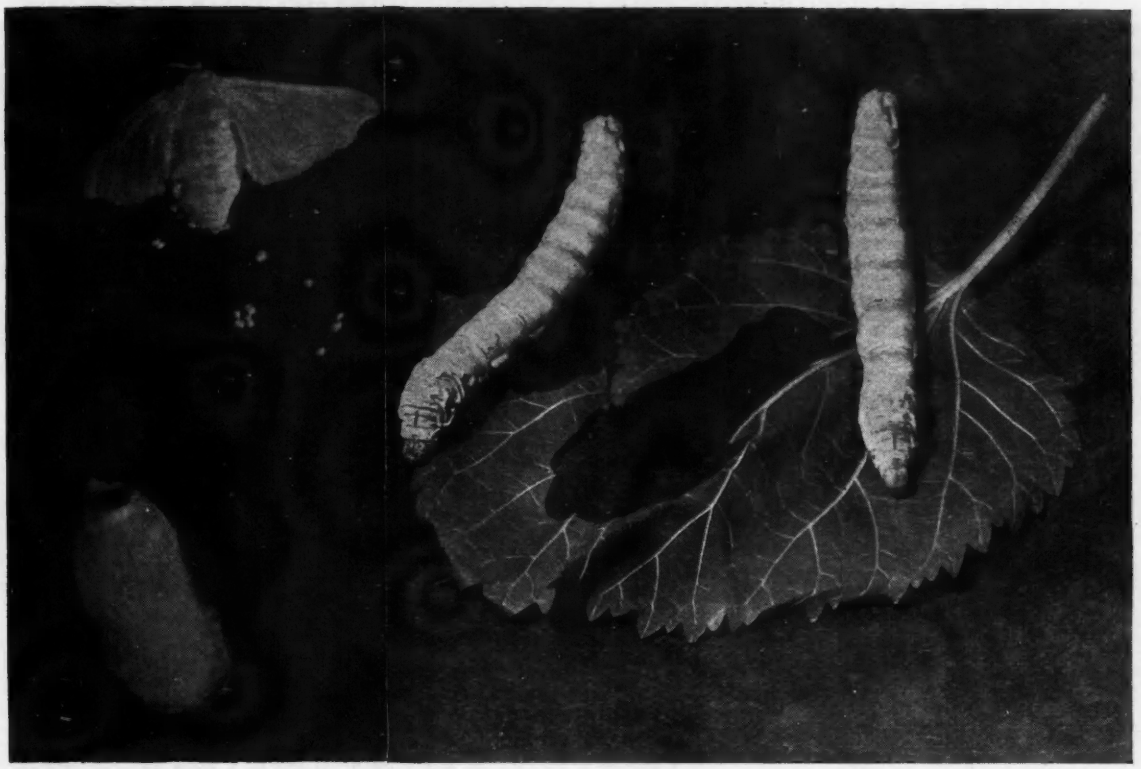
A NEW COOKER WITH A NEW POINT OF VIEW

The demand for a cooker with a large oven has long been known to the gas industry and the "31" gas cooker has been specifically designed to meet that demand. Embodying an 18" oven, built on neat lines, the "31" has many practical features which bear evidence of extensive research and planning—planning which has been governed by the three most important qualities in gas cooker production—efficient working, ease of cleaning and good design. Available in two finishes Cream and Black enamel or Grey mottled enamel, with a choice of Folding Cover Top and Shelf as illustrated or with fixed Splashplate and single plate rack.

GENERAL

Proprietors: Allied Ironfounders Ltd.

GENERAL GAS APPLIANCES LTD. AUDENSHAW MANCHESTER



Reproduced by courtesy of Lullingstone Silk Farm Limited

THE DELICATE STRENGTH OF NATURE

Silk is obtained from the cocoon which is spun by the larva of the mulberry silk moth. The cocoon provides a thread up to 4,000 yards long of which the reelable part varies from 800—1,200 yards in length. About 1/1200 inch in diameter, this delicate thread has surprising strength.

Such a combination of delicacy with strength reminds us of the 'Multitest' diaphragm—durable and tough, yet supple and sensitive. The action of 'Multitest' diaphragms is smooth and easy, keeping the pressure absorption in gas meters and governors down to the minimum. Accuracy and efficiency are correspondingly increased, while the durability of the 'Multitest' diaphragm means greater freedom from running faults.

Each one is subjected to rigid tests and inspections at all stages of manufacture. Special processing of the carefully selected leather protects the diaphragm against corrosion.

'Multitest' diaphragms give trouble-free service for years—they are made that way. Specify them always.

THE METROPOLITAN LEATHER CO. LTD.

Wellington Works, Queen Street, Great Harwood, Lancs.

ML

CMM.31

Peebles

GAS GOVERNORS
& GAS METERS

PEEBLES & CO. LTD.
TAY WORKS
BONNINGTON · EDINBURGH · 6.

PHONE: LEITH 36544. GRAMS "TANGENT, EDINBURGH"

GIBBONS INSTALLATIONS *in* *India*

IN almost every corner of the world Gibbons are adding new names to their already long list of customers across the seas.

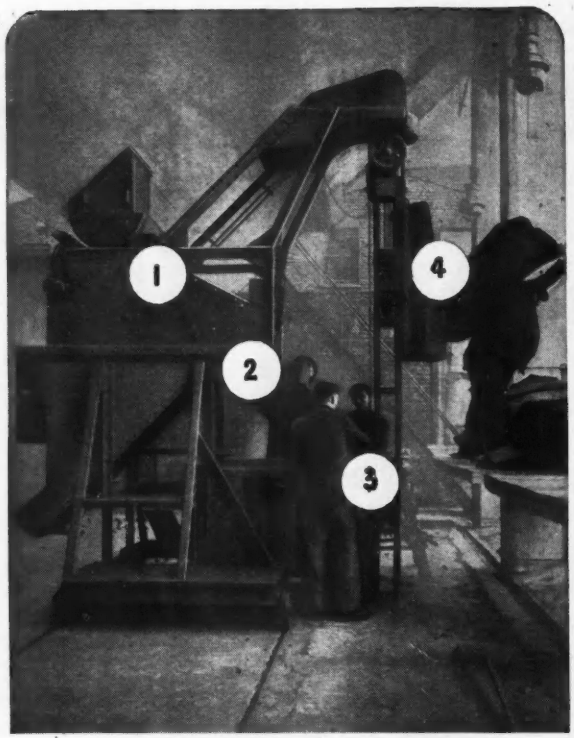
Our special technical staff will be only too pleased to advise you should your problem come within the spheres of the Gibbons organisation.

• **FURNACES AND HANDLING PLANT, GAS PRODUCERS, COKE OVENS, GAS WORKS PLANT AND DRESSLER TUNNEL KILNS.**

GIBBONS **Lead the field** *and SERVE THE WORLD*

GIBBONS BROS. LTD. DIBDALE WORKS, DUDLEY, WORCS. Phone: DUDLEY 3141

JLT 11



(1) IT DEBREEZES 50 TONS OF COKE PER HOUR . . .

(2) WEIGHS IT
(3) BAGS IT . . . AND
(4) THEN HOISTS IT!

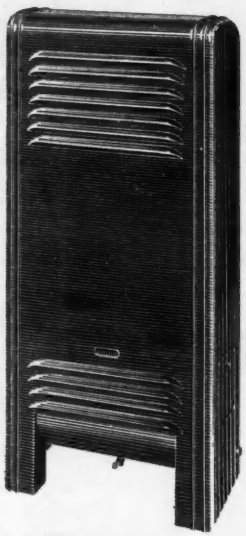
Nine out of ten London and Home Counties Gas Works use the A.C.E. 2 ft. screening unit which handles up to 50 tons of clean coke per hour continuously. Adapted for intermittent running, for bagging purposes, the output is 20/25 tons per hour, screened, weighed and bagged. And the one-up, one-down sack hoist, which is incorporated, speeds up loading. Write for the "Ace" debreezing booklet, which describes the full "Ace" range.

ACE
DE-BREEZING SCREENS

A.C.E. Machinery Ltd., are specialists in concrete elevating plants, platform hoists, runway hoists, warehouse and special purpose hoists, mobile hoists, mobile stackers and mobile lightweight cranes, power winches, capstans.

A.C.E. MACHINERY LTD.
HARLEQUIN AVE., GREAT WEST ROAD, BRENTFORD
Tel. Ealing 6262 (7 lines)
and at Porden Road, Brixton, London, S.W.2 *Tel. Brixton 3293* (7 lines)

The "C.P." CONVECTOR (Type A)



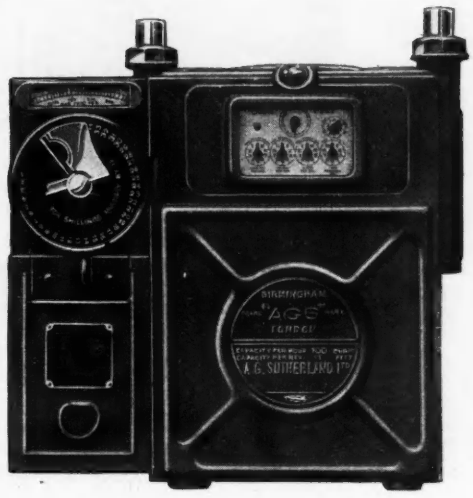
This well-designed convector heater, faultless in construction and finish, provides efficient heating for the home, shop, office, or workshop. Stove Enamelled Bronze, Beige or Green, it stands 30" high.

COWPER PENFOLD
AND COMPANY LTD

IMPERIAL COURT, BASIL STREET
KNIGHTSBRIDGE, S.W.3
Kensington 4111 & 4112

"A.G.S."

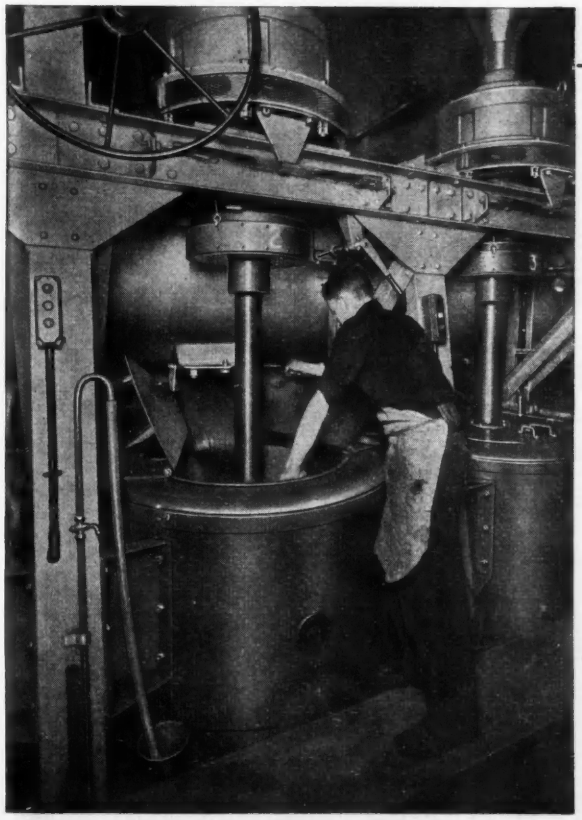
A Sure Indication for the Future . .



Gas Meters

Unsurpassed for Quality, Accuracy & Reliability

A. G. SUTHERLAND LTD.
WARWICK RD., GREET, BIRMINGHAM, 11.
And at LONDON and NOTTINGHAM



BROADBENT

HIGH SPEED

CENTRIFUGALS

STANDARD TYPE MACHINES
DRIVEN BY
DIRECT COUPLED MOTOR
OR
SEPARATE MOTOR
WITH
BOTTOM DISCHARGE
BASKETS
FABRICATED FROM
MILD STEEL, STAINLESS STEEL
MONEL, COPPER, ETC.

80 Years' Reputation for Reliability

THOMAS BROADBENT & SONS, LTD.
HUDDERSFIELD
DISTRICT OFFICES AT
LONDON · BRISTOL · LEICESTER · MANCHESTER · NEWCASTLE

"To produce more for Export"

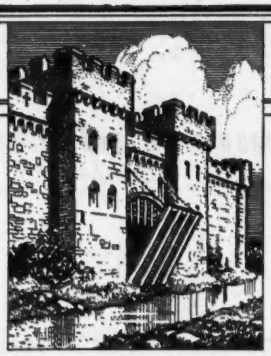
means more steam . . .

. . . which does not necessarily mean more Coal if efficiently used with Turbine Patent Furnaces. It's worth investigating—let us advise you.

SPECIALISTS IN HAND FIRED FORCED DRAUGHT EQUIPMENT.

TURBINE PATENT FURNACES

The TURBINE FURNACE CO. LTD. 238b GRAYS INN ROAD, LONDON, W.C.1. Telephone: TERMINUS 4365



PROTECTION

GAUNTLET

GAUNTLET

WEATHER TESTED PAINTS

ARCHD H. HAMILTON & CO. LTD

27-37 BARDOWIE STREET POSSILPARK GLASGOW.N

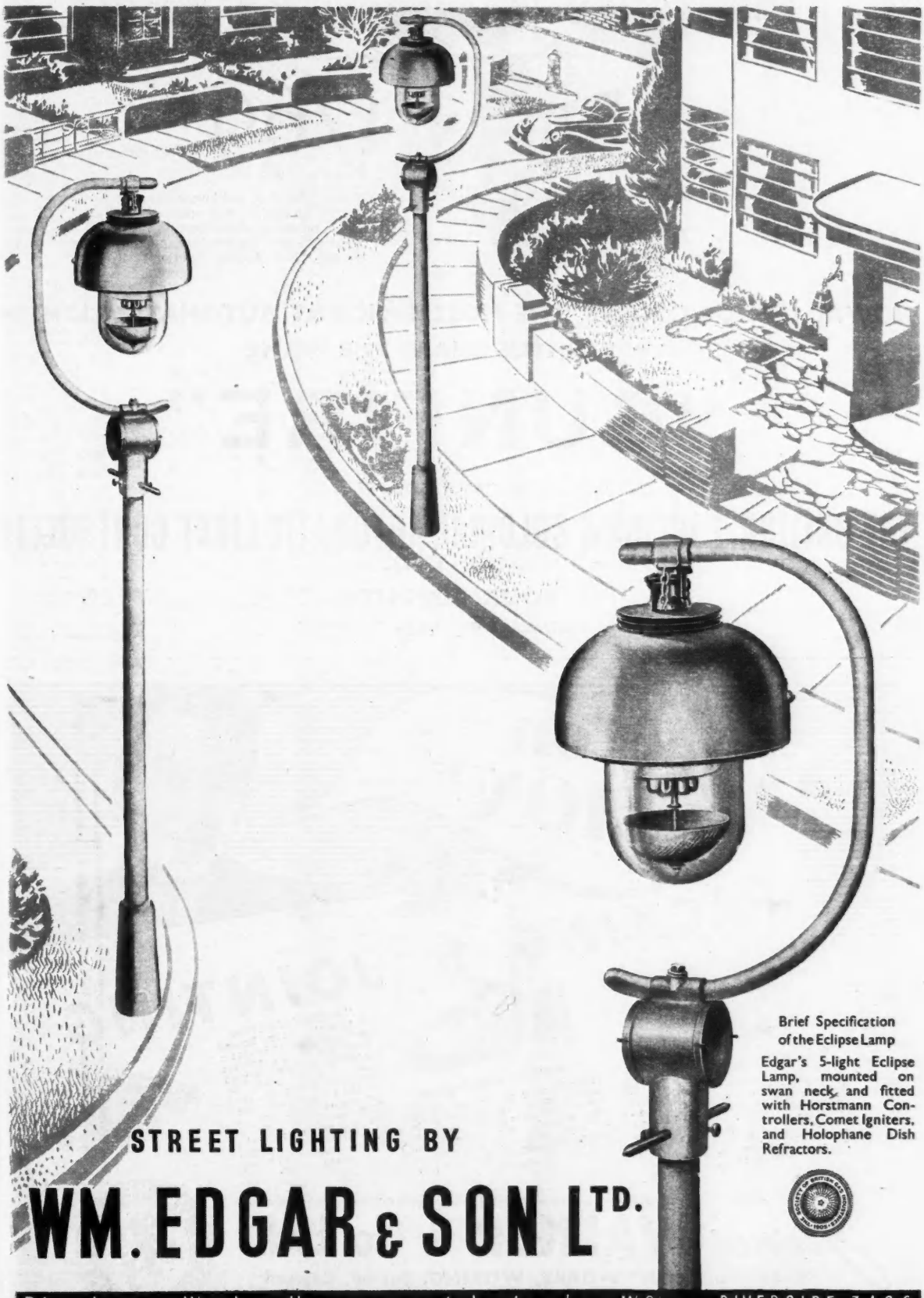
Tools and Appliances for Gas and Water Distribution

PHONE DENTON 2691/2

E. PASS & Co LTD.

GAS & WATER ENGINEERS. DENTON. LANCS.

TELEGRAMS TOOLS DENTON. LANCS.



STREET LIGHTING BY

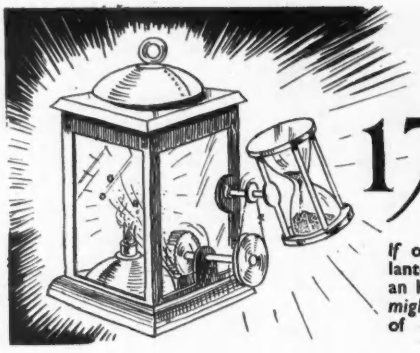
WM. EDGAR & SON LTD.

Brief Specification of the Eclipse Lamp

Edgar's 5-light Eclipse Lamp, mounted on swan neck, and fitted with Horstmann Controllers, Comet Igniters, and Holophane Dish Refractors.

Blenheim Works, Hammersmith, London, W.6. TEL. RIVERSIDE 3486

See our exhibit at THE BUILDING CENTRE, 9, Conduit Street, W.1.



1769

If one John Box *had* invented a lantern to which was attached an hourglass and tinder box, this *might have been* the first example of controlled lighting ignition.

NOWADAYS, OF COURSE, THE MOST EFFICIENT AUTOMATIC LIGHTING APPARATUS BEARS THE NAME

"GUNFIRE"

THE TRADE MARK OF

THE BRITISH, FOREIGN & COLONIAL AUTOMATIC LIGHT CONTROLLING CO. LTD.

BOURNEMOUTH.

ESTABLISHED OVER HALF A CENTURY.

---

rely on 'LION'
PACKING & JOINTING
GUARANTEED BRITISH MANUFACTURE
Walker's GOLDEN WALKERITE
Walker & Co. Ltd LION WORKS WOKING SURREY
"GOLDEN WALKERITE" JOINTING
A world famous compressed asbestos fibre jointing for high pressures and super-heated steam, water, ammonia, acids, gas joints, boiler joints, cylinder covers, condenser doors, water and steam lines of every description. In stock size sheets and standard thicknesses of 1/64 inch upwards. Joints cut to any shape or size.
"LION" CHEVRON PACKING
Primarily designed for very shallow stuffing boxes. Self sealing under pressure. Extreme flexibility provides ready expansion under slight pressure. For high, medium or low pressure water. In moulded rings. Sizes ¼ in. upwards.
"NEBAR" JOINTING
A synthetic rubber bonded cork jointing material that is tough and durable and yet extremely flexible. Easy to cut. Does not shrink or expand during storage. Long life and a positive seal. Ideal for engine sumps and re-frigeration work of all descriptions. In stock size sheets from 1/32 in. to 2 in thickness. Joints cut to any shape or size.
Send for 114 page catalogue which includes packings and jointings specially designed for the Gas Industry.
James WALKER & Co. Ltd.
Head Office. 'LION' WORKS, WOKING, Surrey, England
Phone: Woking 2432 (6 lines) Grams: "LIONCELLE"
WALKER'S TRADE MARK LION PACKING

T. 56

INDEX TO "JOURNAL" ADVERTISERS

A

	PAGE
A.C.E. Machinery, Ltd.	308
Acme Wringers, Ltd.	
Abbott, Birks & Co., Ltd.	S2
Accurate Recording Instrument Co.	
Albright & Wilson, Ltd.	
Alder & Mackay, Ltd.	S4
Ascot Gas Water Heaters, Ltd.	
Ashmore, Benson, Pease & Co. Ltd.	
Ashworth & Parker, Ltd.	
Aspinall's (Paints), Ltd.	S5
Automatic Telephone & Electric Co., Ltd.	
Automotive Products, Ltd.	
Averill, C. R., Ltd.	

B

Bagnall, W. G., Ltd.	
Bale & Church, Ltd.	S5
Balfour, Henry, & Co., Ltd	
Bell's Asbestos & Engineering, Ltd.	
Bellman Hangars, Ltd.	
Benham & Sons, Ltd.	287
Bitulac, Ltd.	
Boydell, E., & Co., Ltd.	
Braddock, J. & J.	
Bratt Colbran, Ltd.	
Bray, George, & Co., Ltd.	
Bristol's Instrument Co., Ltd.	
British Fittings Co. (Hendon), Ltd.	S1
British Flint & Cerium Manufacturers, Ltd.	
British, Foreign & Colonial Automatic Light Controlling Co., Ltd.	312
British Furnaces, Ltd.	
British Gas Purifying Materials Co.	
British Thomson Houston Co., Ltd.	
British Vacuum Cleaner & Engineering Co., Ltd.	
Broadbent, J. C., & Co., Ltd.	
Broadbent, Thomas, & Sons, Ltd.	309
Brockhouse Heater Co., Ltd.	
Broom & Wade, Ltd.	
Brotherhood, Peter, Ltd.	
Bugden, Thos., & Co.	

C

Cannon Iron Foundries, Ltd.	Cover I
Cannon Iron Foundries, Ltd. (Canalloy Tubing and Fittings)	
Carrington, Tom, & Co., Ltd.	
Cellactite & British Uralite, Ltd.	
Chance Bros., Ltd.	
Chaseside Engineering Co., Ltd.	
Chemical Engineering & Wilton's Patent Furnace Co., Ltd.	
Cinema-Television, Ltd.	
Clapham Bros., Ltd.	
Clayton, Son & Co., Ltd.	
Clough (Croydon), Ltd.	
Cochran & Co. (Annan), Ltd.	
Cochrane & Co. (Shettleston) Ltd.	
Collins, Thomas, & Co., Ltd.	
Concrete Proofing Co., Ltd.	S1
Connell, James N.	
Consolidated Pneumatic Tool Co., Ltd.	
Corner, G., & Co., Ltd.	
Cowper Penfold & Co., Ltd.	308
Cox & Danks Ltd.	
Crane, Ltd.	299
Crone & Taylor, Ltd.	
Crossley, Bros.	
Crow, Fred B.	
Curtis, Algernon Lewin	
Cutler, Samuel, & Sons, Ltd.	
Cuxson, Gerrard & Co., Ltd.	

D

Danks, of Netherton, Ltd.	
De la Rue Gas Development Ltd.	
Dempster, R. & J., Ltd.	
Dempster, Robert, & Sons, Ltd.	S5
Derbyshire Silica Firebrick Co., Ltd.	
Dewrance & Co., Ltd.	
Diaphragm & General Leather Co., Ltd.	
Dick, R. & J., Ltd.	
Donkin (The Bryan) Co., Ltd.	Cover II
Douglas, William, & Sons, Ltd.	
Drag Scraper & Engineering Co., Ltd.	296
Drakes, Ltd.	
Drew, H. B., Ltd.	
Dunlop Rubber Co., Ltd. (General Rubber Goods Division)	
Durasteel Roofs	

E

Edgar, William, & Sons, Ltd.	311
Electroflo Meters Co., Ltd.	
Electrolux, Ltd.	
Elliott Bros. (London), Ltd.	
Ether, Ltd.	298
Evershed & Vignoles	
Ewart Chainbelt Co., Ltd.	
Ewart & Sons, Ltd.	
Expanded Metal Company Ltd.	

F

Falk, Stadelmann Co., Ltd.	
Federated Foundries Ltd.	
Filtrators, Ltd.	
Firth, Blakeley, Sons & Co., Ltd.	
Flavel, S., & Co., Ltd.	
Fluxite, Ltd.	
Foster Transformers & Switchgear Ltd.	
Four Oaks Spraying Machine Co., Ltd.	
Fraser & Chalmers, Engineering Works.	
Friedman, Athill, Ltd.	

G

Gas Meter Co., Ltd.	301
Gas Purification & Chemical Co., Ltd.	S5
General Gas Appliances, Ltd.	304
Gibbons Bros., Ltd.	307
Gibbons (Dudley), Ltd.	303
Gills Pressure Castings	
Glover, George, & Co., Ltd.	285
Glover, Thomas, & Co., Ltd.	316
Goodall Clayton & Co., Ltd.	
Goodyear Mechanical Goods	
Grant & West, Ltd.	
Grant, David, & Co., Ltd.	
Green & Boulding, Ltd.	S5
Greening, N., & Sons, Ltd.	

H

Hamilton, A. H., & Co., Ltd	310
Hannan & Buchanan	
Hardman & Holden, Ltd.	290
Harris & Pearson, Ltd.	
Harrisons (London), Ltd.	S5
Harvey, G. A., & Co. (London), Ltd.	287
Helliwells, Ltd.	
Hewitt Construction Co., Ltd.	
Hilmor, Ltd.	
Holden & Brooke, Ltd.	
Holmes, W. C., & Co., Ltd.	S7
Horseley Bridge & Thomas Piggott, Ltd.	
Horstmann Gear Co., Ltd.	
Humphreys & Glasgow, Ltd.	314
Hyde, Silas, Ltd.	

I

I.C.I. Metals, Ltd.	291
Incandescent Heat & Co., Ltd.	
Ingham, John & Sons, Ltd.	
International Coin Counting Machine Co., Ltd.	294
International Combustion, Ltd.	

J

Jeavons, E. E., & Co., Ltd.	S1
Jeavons Engineering Co.	
Jenkins, W. J., & Co., Ltd.	
Jobling, James A., & Co., Ltd.	

K

Keay, E. C. & J., Ltd.	
Keith Blackman, Ltd.	S8
Key Engineering Co., Ltd.	
King, George W., Ltd.	
King, Walter, Ltd.	S3
Kings Patent Agency, Ltd.	S5
Kirkham Hulett & Chandler, Ltd.	
Kleenoff Co.	
Klinger, Richard, Ltd.	

L

LaFarge Aluminous Cement Co., Ltd.	289
Laidlaw, R., & Son, Ltd.	298
Lamont, James H., & Co., Ltd.	288
Lancashire Dynamo & Crypto, Ltd.	
Le Bas Tube Co., Ltd.	
Leeds X.L. Fire Cement Co.	S5
Lomax & Smith, Ltd.	
London Electric Firm, Ltd.	
London Nameplate Manufacturing Co., Ltd.	
London Welding Co., Ltd.	

M

MacPherson, Donald, & Co., Ltd.	
Main, R. & A., Ltd.	333
Main Water Heaters, Ltd.	
Mawitta Drafting Machines, Ltd.	
Meltham Silica Firebrick Co., Ltd.	
Metronic Instrument Co., Ltd.	
Metropolitan Leather Co., Ltd.	305
Mewburn, Ellis, & Co.	S5
Midland Bank, Ltd.	292
Milnes Meters, Ltd.	302
Ministry of Fuel	
Ministry of Labour	
Mitchell, H., & Co.	
Morgan Crucible Co., Ltd.	
Morris Commercial Cars, Ltd.	
Mors Moler	

N

National Enamels, Ltd.	
National Gas Water Heater Co., Ltd.	285
National Savings Committee	
New Bowson Coal Co., Ltd.	
Newton Chambers & Co., Ltd.	330
Niagara Screens (G.B.), Ltd.	
Nicholson & West, Ltd.	292
North British Rubber Co., Ltd.	
Northern Metal Trading Co. Ltd	
Northern Pump & Equipment Co., Ltd.	

O

Oxley Engineering Co., Ltd.	Cover II

P

Parkinson & Cowan (Gas Meters), Ltd.	316
Parkinson Stove Co., Ltd.	
Pass, E., & Co., Ltd.	310
Peckett & Sons, Ltd.	
Peebles & Co., Ltd.	306
Perfecta Gas Appliances, Ltd	
Power Gas Corporation Ltd.	
Powers-Samas Accounting Machines, Ltd.	
Press, William, & Son, Ltd.	
Pulsometer Engineering Co., Ltd.	

R

Radiant Heating, Ltd.	
Radiation, Ltd.	334, 335
Ransomes, Sims & Jefferies	
Rawlplug Co., Ltd.	
Reavell & Co., Ltd.	S1
Renfrew Foundries, Ltd.	
Renwick, Wilton & Dobson, Ltd	
Roneo, Ltd.	
Rose, Sir W. A.	
Royal Institute of Chemistry	
Rubber Asbestos Fibre Ltd.	
Russell, R., & Sons, Ltd.	

S

Salter, T. E., Ltd.	315
Sawer & Purves	336
Scottish Non-Ferrous Tube Industries, Ltd.	
Sentinel (Shrewsbury) Ltd.	
Siebe Gorman & Co., Ltd.	
Sigma Instrument Co., Ltd.	
Sisson, W., & Co., Ltd.	296
Simon-Carves, Ltd.	297
Slingsby, W., & Co., Ltd.	
Smith Meters Ltd.	
Spencer Bonecourt, Ltd.	
Spencer (Melksham), Ltd.	
Sperryn & Co., Ltd.	
Stanton Ironworks Co. Ltd.	S6
Stanweld Engineering Co., Ltd.	
Staveley Coal & Iron Co., Ltd.	
Steels Engineering Products, Ltd.	
Stein, John G., & Co., Ltd.	
Sterling Textile Industries Ltd.	
Stewart & Gray, Ltd.	
Stewarts & Lloyds, Ltd.	
Stoves, Ltd.	288
Strachan & Henshaw, Ltd.	
Stringer Bros.	S3
Sugg, William, Ltd.	
Sumo Pumps Ltd.	
Sutcliffe Speakman & Co., Ltd.	
Sutherland, A. G., Ltd.	309
Sykes & Company	

T

Taylor Woodrow Construction, Ltd.	286
Telegraph Construction & Maintenance Co., Ltd.	294
Thomas & Bishop, Ltd.	
Thomas, Richard, & Baldwins, Ltd.	
Thompson, John, Conveyer Co., Ltd.	
Tully, Sons, & Co., Ltd.	
Turbine Furnace Co., Ltd.	310
Turners Asbestos Cement Co., Ltd.	300

U

Ufix Boiler Co., Ltd.	
Underpressure Engineering Co., Ltd.	S4

V

Vale, Thomas, & Sons, Ltd.	
Visco Engineering Co., Ltd.	302
Vulcan Stove Co., Ltd.	

W

Wakelin, F. H., Ltd.	
Wailes Dove Bitumastic, Ltd.	293
Walker, C. & W., Ltd.	336
Walker, Crossweller & Co., Ltd.	
Walker, James, & Co., Ltd.	312
Waller, George, & Son, Ltd.	
Wellington Tube Works, Ltd.	Cover IV
Westbury & Seend Ore & Oxide Co. Ltd.	
West's Gas Improvement Co., Ltd.	Cover III
West's Piling & Construction Co., Ltd.	
Westwood & Wrights, Ltd.	S3
Whessoe, Ltd.	295
Whitehouse, Wm., & Co., Ltd.	
Whittaker Ellis, Ltd.	
Widnes Foundry & Engineering Co., Ltd.	
Wild, M. B., & Co., Ltd.	
Wilkes, A. H., & Co., Ltd.	
Willey & Co., Ltd.	S2
Williams, John E., Ltd.	
Williamson Cliff, Ltd.	
Wilson, George, Gas Meters, Ltd.	
Winn & Coales, Ltd.	
Winn, Charles, Ltd.	
Witkin Reynolds & Co., Ltd.	
Woodall-Duckham Vertical Retort & Oven Construction Co. (1920), Ltd.	Facing Page 328
Wright, Alexander, & Co., Ltd.	

Agencies	S5
Appointments Wanted and Vacant	S5, S6
Books in Stock	
Company Notices	
Contracts Open	
Educational	
Miscellaneous	
Patents	S4
Plant, &c.	
Plant for Sale and Wanted	S5
Publications	
Repairs	S4
Trade Cards	

HUMPHREYS & GLASGOW LTD.

Installations for Production

of

Carburetted Water Gas

Blue Water Gas

Producer Gas

Special Gas for Synthetic Processes

Hydrogen

Ancillary Plant

for

Waste Heat Steam Production;

Gas Cooling & Cleaning; Fuel Handling & Charging;

Ash & Dust Disposal; etc.

Humglas House,
Carlisle Place,
London, S.W.1.

H&G

Telephone:
Victoria 3961 (six lines)
Telegrams:
"Humglas, Sowest, London."

Established 1892

CONTENTS

EDITORIAL

	Page
Sales and Service	317
Junior Pluto	317
The Tax on Water Heaters	318
The Imaginative Manufacturer	318
The Juniors of To-morrow	318
Education Regulations, 1948	318
Personal	318
Letter to the Editor	319
Diary	319
News in Brief	320
Anticipating Demand at Coventry	320
Friends House	321
Institution of Gas Engineers, Programme of Annual Meeting, June, 1948	322
Gas Engineers' National Guild	322
The Gas Bill in Committee Stage	323
In Parliament	324
Liquid Purification Plant at Linacre	324
Consolidation at Swindon	324
Eastern Tar Board's Activities	324
Up Against It	325
A Fine Engineering Record	325
Gas and Electricity in Switzerland	326
I.G.E. Associate Membership Examination	326
Sales and Service Organizations for the Smaller Gas Undertaking, P. G. Wright, Assoc.M.Inst.Gas E., Sales and Service Manager, Uxbridge and Slough Gas Companies	327
North of England Association, Annual Meeting	332
Coventry Hippodrome Heated by Gas	337
Gas Undertakings' Results	338
Company News	338
Model Gas-works	338
Gas Stocks and Shares	338

Advertisement Index Page 313 **Publishers' Notice Page S4**

VOLEX AIR HEATERS ENSURE FRESH WARM AIR INDOORS

Sole Makers: T. E. SALTER LIMITED TIPTON STAFFS. *Telephone:* TIPTON 1657/1658

PARKINSON & COWAN

(GAS METERS) LTD.

Parkinson & Cowan — the name behind which lies the experience of yesterday, the knowledge of today — and the invention of tomorrow.

DOMESTIC & INDUSTRIAL METERS

Head Office: Terminal House, Grosvenor Gardens, London, S.W.1. Telephone: SLOane 0111.

Branches: North London, South London, Birmingham, Manchester, Newcastle, Glasgow and Belfast.

CMPC.3

GAS JOURNAL

Vol. 254 May 12, 1948 No. 4432

SALES AND SERVICE

WRITTEN during a long spell in hospital, away from all his records and papers, the paper on "Sales and Service Organization" which Lieut.-Colonel P. G. Wright, Sales and Service Manager of the Uxbridge and Slough Gas Companies, presented to the Southern Association of Gas Engineers and Managers (Eastern District) on April 27 was addressed more particularly to the smaller gas undertakings—those 140 or so companies serving from 50,000 to 100,000 inhabitants and selling from 500 to 1,000 million cu.ft. of gas per annum. With the hospital radio switched on for over 14 hours a day he might well have missed the target of his discourse, but the impression one gets on reading the paper, after listening to his skilful summary, is that even in an already overloaded sphere the 50 odd pages of text, diagram, and picture are full of ideas especially helpful to the manager of the smaller company and useful as a basis for discussion about the problems which arise when small units are grouped under one control.

Colonel Wright started with the Gas Light and Coke Company as a staff pupil in 1929, and for four years he was on the Gas Sales Manager's personal staff. In 1937 he was seconded to the South Eastern Gas Corporation to organize sales and service at Lewes, and later at Slough. During the war he had a varied career, first in command of a battery, then on the staff at the War Office, and then loaned to the Canadian Army, serving in Canada and America. Next he went with the Air Force to Germany and Scandinavia, and he returned to Slough in 1946 and remained until the start of his illness last July. He brought back into civil life a clear sense of organization, and in constructing his paper he approached his subject from the point of view of the plan, the survey, and the budget. He had something novel and penetrating to say on all three points, and although in the discussion that ensued there were wide differences of opinion on matters of detail there was general agreement that Colonel Wright had applied his courage to good purpose and had contributed something worth while to the literature on a subject that has been debated ever since the gas industry was born.

The main criticisms of the paper were that the ideal unit of operation depended more on local characteristics than on basic numbers; that in these days of change it was impracticable to produce a budget that would have any real meaning, and that the author had not sufficiently stressed the great value of home service in the home—as distinct from home service as a means of propaganda. Many useful comments were made on training, to which the companies served by Colonel Wright are very much alive, with emphasis on the importance of training starting from the top. One of the speakers described a scheme whereby the foremen came in for one day per month so that they should be kept properly informed as to the latest appliances. It is, as several of the members said, true that in the smallest areas the people regard the local foreman as "the gas company." We do not know what may happen under nationalization, but so far as sales and service are concerned it must still rest with the man on the spot to make or mar the success of the undertaking.

JUNIOR PLUTO

WHETHER studied from the point of view of the value of photographic record or regarded purely as an account of an unusual mainlaying job, well carried out, the paper which Mr. J. A. Williams, of the Gas Light and Coke Company, gave to the April meeting of the London and Southern Junior Gas Association was in many respects extraordinary. Without the still and moving pictures which Mr. Williams was able to show on the screen his story would have lost much of its point; at the same time such an array of slides and films without a "plot" would have fallen equally flat. But Mr. Williams, already an enthusiast for photographic records, had the chance of his life to put his ideas into practice when early in 1939 he was loaned to the Sheppey Gas Company as Clerk of Works on the laying of a bulk supply main from Sittingbourne to Sheerness. Pluto, as we came to know it in the latter days of the war, had not been conceived at that time, but Mr. Williams' story of his prolonged battle with the elements and his ultimate success in getting the gas main safely under the sea at Elmley Ferry, demonstrates at least that those who laid the oil pipe line from England to the Continent were not the first people to encounter the difficulties of submarine pipe-laying.

Much of the work involved in laying the gas main, the total length of which was some 13,000 yards, with about half a mile actually under the tidal waters of the Swale, had to be carried out under primitive conditions—for at that time the Americans had not arrived in this country with all their marvellous machinery for moving great weights and doing away with unnecessary work—and 15 months elapsed between the issue of the specifications for the tenders and the completion of the work. The outbreak of war did not help matters, for although the demand for gas was increasing, the work was handicapped by enemy action, and night work had to be suspended because of the compulsory black-out. Ten years have passed since the scheme was planned, and those most closely acquainted with the job still feel that it was tackled in the best possible way. It is only very rarely that a gas undertaking has to undertake such a task, and there is all the more reason, therefore, to congratulate the author on having had a camera at hand throughout in order that a permanent pictorial record might be made. There is undoubtedly a growing appreciation of the importance of

the photographic record, and the discussion which followed the presentation of Mr. Williams' paper suggested that, in particular, the Tottenham and District Gas Company is utilizing the camera to record the progress in the erection of its entirely new works at Ponders End. Whether or not we shall see a new thriller entitled "The Birth of a New Gas-Works" is not yet known, but both Mr. Deas, the London Juniors' President, who is Engineer in Charge of the Ponders End works, and Mr. E. O. Rose, Distribution Engineer of the Company, led us to hope for something of the kind. Such work is not for the professional photographer but for the technical man who is on the spot all the time; the man who can whip out his camera and take a "shot" while a particular job is being done.

Mr. Williams' paper and a selection of his photographs will be published later in "GAS," together with an interesting account which Mr. G. G. Warne, Past President, gave of the laying of a duplicate 9 in. main across Langstone Creek to supply gas from Portsmouth to Hayling Island.

THE TAX ON WATER HEATERS

WE have set out in these columns in no uncertain terms our views of the purchase tax on gas water heaters, and it is well known that representations have been made to the Chancellor of the Exchequer by the British Gas Council, who have advanced wholly logical arguments for the cancellation of the pre-Budget tax of 75%. The Chancellor at the time (Mr. Dalton) said he would look into the matter. Then, last month, came Sir Stafford Cripps's bombshell of 100% purchase tax, which is fantastic and seriously threatening the gas water heating load. A gas water heater is not a luxury, as is pointed out forcefully in an article by a special correspondent which we publish on a later page of the "JOURNAL" to-day, and to which we would call attention. Unless some practical solution is speedily found the gas industry may well be forced to permit the water heating market to stagnate, the while the position of the water heater manufacturers is intolerable. The contention put forward by the writer of the article in question is that gas undertakings should formulate simple hire and hire-purchase programmes covering three, five, or even seven year periods. The purchase tax can be confined to the first twelve-monthly payments; alternatively, it can be spread over the whole period. Simple hire direct to local authorities could also do much to help. Some undertakings are already embarking on such schemes. The situation calls for much more widespread attention and consideration.

THE IMAGINATIVE MANUFACTURER

Imagination is rare in these days of materialistic conquest, so rare that its few appearances are often wrongly attributed. There are some who assert that there are few signs of imaginative thinking in the gas industry and that slow evolution has taken the place of inspiration. We find it difficult to accept such a belief in view of the obvious contradictions which appear almost daily, and in this connexion a particularly good weapon has just come to hand. Few will deny that in the production of the New World No. 1430 cooker, Radiation, Ltd., displayed not a little imagination, introducing new basic materials and new principles of design. The same firm has displayed further imagination by producing a film to instruct fitters in the construction and maintenance of this cooker. The film, which is designed to help the fitter when he is installing the appliance and give the housewife such hints as will enable her to use it to the best advantage, is in two parts. The first, in black and white, shows Mr. F. Brinsley, of Radiation, Ltd., assembling the cooker before an audience of fitters; the second part, in technicolour, shows the enlightened fitter handing over the cooker to the housewife with some good advice. The advantage of the film is that it is not too long (20 minutes), that it does not attempt too much, and that the camera work is clear without being "clever." It will shortly be available to gas undertakings and we understand that, whenever possible, a technical representative of the manufacturers will be present when the film is shown. On May 5 the film was shown to those who played in it—Mrs. Wolsey, as the housewife, and a group of fitters from the Edgware Road department of the Gas Light and Coke Company. Here then is another manifestation of the hard work, desire to serve, and—may we add—imagination, which has ever been the strength of our industry.

THE JUNIORS OF TO-MORROW

Reference to the future of technical men in the gas industry was made by Mr. J. Hunter Rioch, of Cambridge, when he addressed members of the Eastern Junior Gas Association on May 3, when the Association was entertained by the Cambridge University and Town Gas Light Company. We thoroughly agree with his contention that there will be a greater need than ever for technical men in the proposed new set-up of the industry. "I believe," he said, "that, generally speaking, the staffs of gas undertakings will tend to be increased. I shall be very surprised if our greatest difficulty is not a dearth of technical men." This, we would add, will apply perhaps more particularly to the distribution side of the industry, which daily becomes more of a specialist job.

EDUCATION REGULATIONS, 1948

The revision of the Education Scheme of the Institution of Gas Engineers has, as is well known, been under review for some considerable time and has been the subject of much discussion at the autumn research meetings of the Institution during the past few years. On a later page we refer to the new Regulations which, as Communication No. 330, has now been published by the Institution. While the standard to be attained for the new Associate Membership Examination will be rather higher than has hitherto been expected of candidates for the Higher Grade Examination in Gas Engineering (Manufacture) or (Supply), the advantages to be derived from the adoption of the scheme are such as fully to compensate students for the additional study and training they will be required to undertake. In the first place, it will ensure that the standard of academic attainment needed for corporate membership of the Institution of Gas Engineers will be comparable with that of other professional institutions and, in the second place, it will enable students who have qualified for corporate membership of the Institution to become qualified for corporate membership of other engineering institutions without an undue amount of repetition or further study.

Personal

Mr. J. E. POWERS, F.C.W.A., Office Comptroller of the Liverpool Gas Company, has been appointed President of the Liverpool Branch of the Institute of Cost and Works Accountants for the year 1948-49.

* * *

To mark his departure from the Inchgreen Works of the Greenock Corporation Gas Department, to take up the position of Works Superintendent at Tradeston Gas-Works, Glasgow, Mr. GEORGE ROYDEN was presented with a cheque on behalf of the Greenock staff and employees. Making the presentation, Mr. Ronald Keillor, Gas Manager, stated that Mr. Royden had come to Greenock in 1945 almost at the conclusion of the second world war and had a busy three years supervising an extensive programme of repairs and renewals to the gas-works plant. Reference was made to the high qualifications held by Mr. Royden and the success with which he had supervised a team of some 120 gas-works employees whose wage bill amounted to £39,000 in 1947.

* * *

Colonel G. S. EUNSON has retired from the Northampton Gas Light Company, after just over 65 years' continuous service. He joined the Company on his 17th birthday, in January, 1883, and became Assistant Manager in 1889. On the death of his father in April, 1911, he was appointed Manager. He joined the Board in 1935, and a year later became Managing Director. Since 1942, he has also been Chairman of the Company. His father, Mr. John Eunson, and his grandfather held important managerial positions with the Company, and the family record of 103 years' service in one undertaking now closes. The new Chairman is Alderman S. C. ADNITT, who for the past 15 years has been a Director. The new Manager is Mr. H. BANKS, who became a pupil to Mr. John Eunson 48 years ago and was appointed Chief Engineer (a post he will retain) in 1936. Mr. Banks has also been added to the Board of Directors.

A new appointment to the Council of the Gas Research Board has recently been made in the person of Mr. A. E. WHITAKER, Chief Engineer of Ascot Gas Water and Heaters, Ltd. Mr. Whitaker, who was awarded an O.B.E. for his research work on war weapons, is an M.A., M.I.E.E., and a Fellow of the Institute of Physics. He is also very active on the Council of Industrial Design and on the Board of Directors of James Bruton & Sons, Ltd., Steel Ceilings, Ltd., and is Chief Engineer of Nash & Thompson, Ltd.

* * *

Before returning to the Bilston Gas and Coke Company as Chief Engineer, Mr. FRANK HARVEY, Gas Engineer and Manager to the Spalding U.D.C. for the past two years, was presented with a barometer by the staff and employees of the works and distribution departments. The presentation was made by Councillor G. W. Chatterton, Chairman of the Gas Committee, who paid high tribute to Mr. Harvey's work in the town. Mr. R. C. ARNOLD, Mr. Harvey's successor, also spoke.

Letter to the Editor

Insulation of Oxide Purifiers

DEAR SIR,

The St. Helens Corporation Gas Department has recently insulated three sides of a set of five 40 ft. by 30 ft. by 6 ft. cast iron purifier boxes in a manner which is perhaps novel and which has proved to be exceedingly cheap and very effective. It is felt that other gas undertakings wishing to insulate boxes will be interested in the details. One side of the boxes was not insulated because it was protected by a heated valve house.

The insulating material is phenol resin bonded fibre glass formed into mats manufactured by Fibreglass, of St. Helens, the mats being supplied ready cut to size. The length of the lagging installed was 218 ft., the fibre glass mats being in two sizes—namely, 6 ft. by 1 ft. 11 in. by 1 in. thick, and 6 ft. by 1 ft. 4¼ in. by 1 in. thick, ready perforated to fit over the cast iron bosses. The cost of this material delivered on site was only £20.

The cast iron side plates of the purifiers were originally provided with three bosses per plate for securing insulating sheeting. These bosses were filled with wooden plugs to receive black japanned 1½ in. by 14's wood screws to secure aluminium sheeting as a weather protection to the glass fibre mats. The latter were attached to the purifier sides by a liberal application of thick red lead paint to which the mat adhered. This left a 2 in. cavity between the mat and the aluminium sheets, thus giving additional insulation.

The aluminium sheets were 18 gauge, measuring 6 ft. by 3 ft. polished surface costing £100, manufactured by the British Aluminium Company, Ltd., providing a first-class appearance and avoiding corrosion.

The following is a detailed statement of the cost, which compares most favourably with other methods, irrespective of the indestructible nature of the insulating material :—

Total Cost of Insulation, Including Erection.

	£	s.	d.
Glass fibre	20	10	2
Aluminium sheets	93	18	4
Black japanned screws, paint and plugs, &c.	4	3	7
Labour, including scaffolding	51	19	9
	170	11	10

Yours faithfully,
R. L. GREAVES,
Engineer and General Manager.

Corporation Gas-Works,
Warrington New Road,
St. Helens.
May 5, 1948.

Nottingham Gas Committee has approved a scheme for completion of extensions to Basford Gas-Works. With extensions already in hand, these will increase the gas-making capacity of the works by 4,000,000 cu.ft. a day. The Chairman of the Committee (Ald. W. Sharp) says the Committee is trying to make the undertaking self-supporting as much as possible. At present about 6,000,000 cu.ft. of gas a day is being supplied by Stanton to Nottingham, Long Eaton, and Derby, and 1,000,000 cu.ft. a day is being taken locally from Pinxton. The contract with Pinxton ends this year, and that with Stanton in two years.

Diary

May 13 and 14.—**Wales and Monmouthshire Association of Gas Engineers and Managers**: Annual Meeting. Prestatyn.

May 14.—**Federation of Gas Employers**: 30th Annual General Meeting of members in Scotland, Central Hotel, Glasgow, 2.30 p.m.

May 14.—**Junior Institution of Engineers**: Meeting, Royal Society of Arts, Adelphi, W.C.2, 6.30 p.m. Fifth Stevens Memorial Lecture, "Coal—Oil—Chemicals," by Dr. J. G. King, O.B.E.

May 14.—**Junior Institution of Engineers**: Fifth Stevens Memorial Lecture, "Coal, Oil, Chemicals," Dr. J. G. King. Royal Society of Arts, Adelphi, 6.30 p.m.

May 19 and 20.—**Eastern Association of Gas Engineers and Managers**: General Meeting, Norwich. (May 19: Golf competition, reception and dance. May 20: Business meeting; paper, "Refractory Materials in Relation to the Manufacture and Use of Gas," A. T. Green, O.B.E., F.R.I.C., 10 a.m. Association Luncheon, 12.15 for 12.30 p.m. Broads trip, 2.15 p.m.)

May 22.—**London and Southern Junior Gas Association**: Visit to the St. Albans Works of the Watford and St. Albans Gas Company.

May 24.—**London and Counties Coke Association**: Finance Committee, 10.30 a.m.; Executive Committee, 11 a.m.; Central Committee, 1.30 p.m. Gas Industry House.

May 24.—**British Gas Council (Midland District Board)**: Inauguration of Discussion Group for Home Service Advisers, Grand Hotel, Birmingham, 2.30 p.m.

May 25.—**Southern Association of Gas Engineers and Managers**: Spring General Meeting. "The Removal of Tar, Naphthalene, and Ammonia from Gas," S. Pexton, D.Sc., Ph.D., G. Dougill, M.Sc., F.R.I.C., and L. A. Ravald, M.Sc.(Tech.), A.R.I.C., 2.30 p.m., Connaught Rooms, London.

May 26.—**Manchester District Junior Association of Gas Engineers and Yorkshire Junior Gas Association**: Joint visit to Messrs. Newton Chambers, Ltd. Thorncliffe.

June 1.—**Southern Association of Gas Engineers and Managers (Eastern District)**: County Meeting. All-day visit to the Dagenham Works of the Ford Motor Co., Ltd.

June 5.—**Scottish (Eastern) Junior Gas Association**: Annual General Meeting, Edinburgh.

June 8.—**Gas Engineers' National Guild**: Annual General Meeting, Friends House, London, 5 p.m.

June 8-11.—**Institution of Gas Engineers**: 85th Annual General Meeting. Friends House, Euston Road, London, N.W.1.

June 9.—**Women's Gas Council**: Annual General Meeting, Central Hall, Westminster, 3 p.m.

June 19.—**Scottish (Eastern) Junior Gas Association**: Annual Outing, Fife.

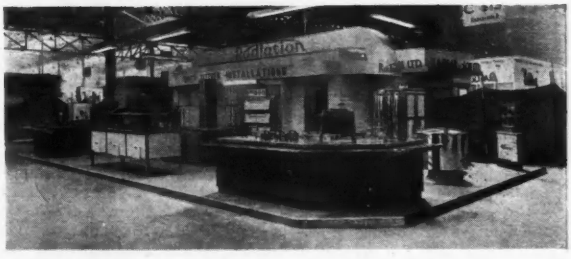
June 19.—**Manchester District Junior Association of Gas Engineers**: Ladies' Day, Blackpool.

June 19.—**London and Southern Junior Gas Association**: Annual General Meeting. Presidential Address.

June 20.—**London and Southern Junior Gas Association**: Ladies' Day.

June 23.—**Western Junior Gas Association**: Summer Meeting and Ladies' Day. Visit to the Letchworth Factory of Messrs. Ewart & Sons, Ltd.

June 29.—**Southern Association of Gas Engineers and Managers**: Summer Meeting. All-day visit to the coke oven plant at the Beckton Works of the Gas Light and Coke Company.



Pictured above is the stand of Radiation Ltd. at the British Industries Fair, Birmingham, on which three new appliances were shown for the first time together with other large cooking equipment. One of these, the Kingfisher fish fryer, a pre-production model, was especially displayed for overseas buyers. Of interest, too, were the new New World gas heater automatic water boiler and the New World industrial scale reducer, Model 2000.

News in Brief

Scunthorpe Town Council has received sanction from the Ministry of Fuel and Power for the installation of a new gasholder of 1,000,000 cu.ft. capacity.

The Alliance and Dublin Consumers Gas Company has announced an increase in the calorific value of the gas supplied from 400 to 425 B.Th.U., and a decrease in price of 2d. per therm.

Fines Totalling £85 with 10 guineas costs, were imposed on the Cannock and District Gas Company at Cannock on 10 summonses alleging a supply of 90 tons of coke to registered customers in excess of their authorized quantities, and to unlicensed consumers. The offences were admitted.

Messrs. E. Boydell & Co., Ltd., announce that prices of the Muir-Hill "Hiway" 3 yd. dumper (Models 10S and 10B) have been reduced by £15, and of the shunting tractor (Model 100) by £10. These reductions are made in accordance with the Government's policy as expressed in the recent F.B.I. Report.

The Long Established Coke Trade between Scotland and the Baltic countries, which had helped pre-war to make the East Coast coal ports among the busiest in the country, has been resumed. Coke is being exported from Granton. In April 1,500 tons of coke went to Sweden and 1,300 tons to Finland.

A Complete New Installation of continuous vertical retorts and a new gasholder of 250,000 cu.ft. are to be installed in Lisburn (Co. Antrim) Gas-Works. The local authority has received the permission of the Northern Ireland Ministry of Health and Local Government to borrow £115,000 from the Government Loan Fund to carry out these improvements.

An Effective Window Display was arranged at the showrooms of the Northampton Gaslight Company in connexion with the showing of the popular film "Brighton Rock" at a local cinema. During the same period a New World No. 1430 cooker was displayed in the foyer of the cinema and was seen by more than 20,000 people who witnessed the film.

The Wages Bill of the Aberdeen Gas Department will be increased by about £5,000 as the result of the recent award by the National Joint Industrial Council. Under the award, which became effective on April 4, the existing war wage advances to male gas-workers of 18 years and over are increased by 1½d. an hour for day workers, 1s. per shift for shift workers, with corresponding increases in the case of pieceworkers.

The Elstree R.D.C. ranks second among the Rural Districts of England and Wales for permanent houses built in proportion to population. There was a brief ceremony recently at the handing over of their 200th house, after which representatives of the Watford and St. Albans Gas Company delivered and fixed the gas cooker and wash boiler chosen by the new tenant. All tenants have a free choice of means of cooking. And in the 200 houses occupied 168 have gas cookers.

On April 14 Electrolux, Ltd., entertained prominent officers of the Gas Light and Coke Company at their Luton factory. The four principal guests at the gathering were: Dr. H. Hollings, Controller of Research, Mr. S. G. Aberdein, Commercial Manager, Mr. R. S. Johnson, Controller of Services, and Mr. H. C. Exell, Stores Controller. The remaining guests were the Company's Divisional Managers, Deputy Divisional Managers, and Section Managers of the Company's Headquarters Division. Mr. S. Broughton, Managing Director of Electrolux, in a short speech at the luncheon, recalled the long and happy associations that his Company had enjoyed with the Gas Light and Coke Company and pointed out that the export commitments for their refrigerators were the highest in their history, and therefore there was bound to be a restriction on deliveries to the home market.

Edinburgh Corporation this year celebrated its jubilee anniversary as a Corporation Gas Department and its 130th anniversary of the first distribution of gas in the city. These facts were mentioned by the officials entertaining the Council during the annual visit to Granton Gas-Works, when Councillor West Russell, Convenor, received the guests. Speaking at the gathering, Councillor Russell said that coal costs had increased by 331% and wages by over 400% over the 60 years of Corporation control, but that the cost of gas was now 6% less than it was 60 years ago. The Lord Provost made a plea for the continued employment and unhampered activity of the present officials in the technical development of the gas service in the public interest, when nationalization became a fact. Mr. D. D. Melvin, Engineer and Manager, paid a tribute to the staff and hoped that, under nationalization, some method might be devised to perpetuate the local sense of pride in the undertaking.

Denny Town Council, after considering a report by the Gas Engineer, has agreed to accept a tender from West's Gas Improvement Company, Ltd., to re-set No. 2 bench of retorts.

Stockton-on-Tees Corporation has been authorized by the Ministry of Fuel and Power to proceed with the installation of four purifiers at the gas-works at a cost of nearly £50,000.

Hawick has become an exporter of coke, and during the past two or three weeks the Hawick Gas Company has sent to Sweden nearly 300 tons; more is to follow. This is the first time in history that the Gas Company has had an exportable surplus of coke. To facilitate the loading of the coke into wagons an overhead bridge has been constructed by the staff.

Following Proposals that Keighley Corporation should obtain supplies of gas from another undertaking as an alternative to making extensions at its own gas-works, Keighley Gas Committee has recommended that a detailed report in support of the extension, and the need for the retention of the gas undertaking, be forwarded to the Ministry of Fuel and Power.

Orders have been received by the Power Gas Corporation, Stockton-on-Tees, for two carburetted water gas plants. The larger plant has been ordered by the Newcastle-on-Tyne and Gateshead Gas Company for the Redheugh Works. It will produce 4,500,000 cu.ft. of gas a day. The other plant, for the Farnham Gas and Electricity Company, will produce 1,000,000 cu.ft. a day.

Two Officials of the Newcastle-on-Tyne and Gateshead Gas Company, Ltd., have retired after long service. Mr. C. H. Pigg, of Tynemouth, who has had 50 years' service, was from 1936 manager of the Wallsend showroom. Mr. G. Waugh, of Monkseaton, who has had 47 years' service, has been through most of the Company's departments. Formerly a branch showroom manager, he was transferred to the head office during the war as general assistant to the accountant.

It Has Been Decided by Stockton-on-Tees Corporation to employ main laying contractors owing to difficulty experienced by the Gas Department in obtaining gas main layers. It is stated that work on housing and trading estates locally is being impeded through a shortage of these skilled workers. The Corporation has advertised for mainlayers without result, and as a long-term policy it is proposed to re-advertise, and offer housing accommodation in Stockton to applicants as an inducement.

Each Year the Coventry Works of George Wilson Gas Meters, Ltd., employing sheet metal workers, contest for a cup which was presented by the late Mr. J. H. Wilson, who was Chairman and Managing Director of the firm. Generally speaking, the firm achieve a considerable margin of success and last year were only beaten in the finals. This year, however, they were dismissed in the semi-final round by last year's winners, Coventry Radiator and Presswork Company, Ltd., by 4—0. Following the game a social evening was held for the team and supporters.

ANTICIPATED DEMAND AT COVENTRY

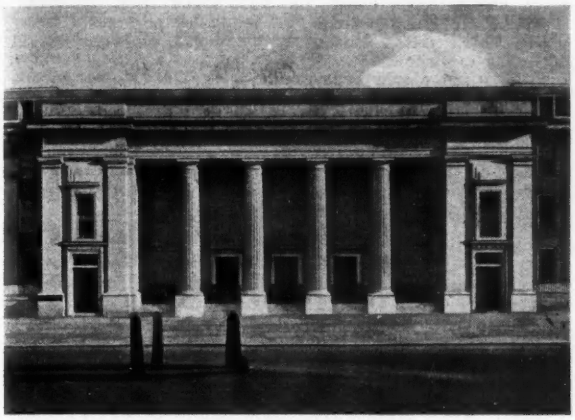
Because of the bringing of recent supply schemes into operation and of anticipated increased demand, Coventry Corporation Gas Undertaking faces the virtual certainty that by 1951 the maximum output capacity of their present large manufacturing plant will have been reached.

Owing to the difficulty of securing plant, the Gas Committee decided last September to proceed at once to prepare an extension scheme so that the necessary orders could be placed without delay and thus ensure that the extensions were available when required.

A scheme has since been prepared which will add 6 million cu.ft. per day to output capacity by the installation of vertical retorts and the necessary coal and coke handling and ancillary plant. This scheme was estimated to cost £1,021,112.

With a view to maintaining the manufacturing plant in its state of complete modernity, it has now been decided to provide mechanically operated producers in place of the manually operated producers envisaged in the original scheme. This will cost a further £25,000. It is expected this modification will have the blessing of the Ministry of Fuel and Power.

Since the beginning of this year schemes arranged early last year have been brought into operation which have added a guaranteed weekly load of 16 million cu.ft. The schemes concerned are the supply of the whole of the gas needed by the Nuneaton Gas Company, and bulk supplies to the Rugby Gas Company and to Birmingham Corporation. Coventry has for many years been supplying all the gas needs of Kenilworth and Bedworth.



FRIENDS HOUSE

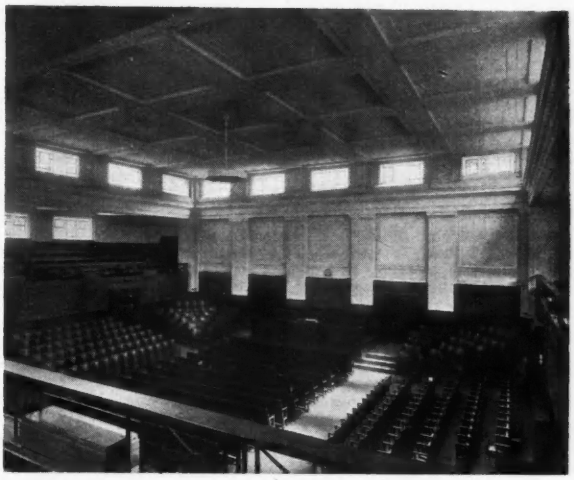
A BRIEF DESCRIPTION OF THE NEW VENUE OF THE INSTITUTION OF GAS ENGINEERS

LAST June the Institution of Gas Engineers held its annual convention in Birmingham; this year it returns to the capital, but to a new venue, Friends House, Euston Road. Since 1926 this magnificent building has attracted the attention of passers-by, not so much because its height or finish catch the eye, but because its dignity, tone, and above all, its austere simplicity make it one of the most interesting and at the same time delightful of London's multitude of architectural styles. It is thought that a brief description of the building and its amenities will be of interest to members entering its portals for the first time.

When a number of architects were invited to furnish the Society of Friends with designs for a new headquarters, the requirements, briefly, were to group round a large central hall or meeting house, to hold about 1,400 people, a series of offices and committee rooms, an open courtyard with connected shelter spaces, and a block of business premises intended to be let as a means of revenue. The successful plan was that of Mr. Hubert Lidbetter, A.R.I.B.A., who received for it the R.I.B.A. bronze medal for the best building erected in London during the year.

The Institution's business will be conducted in the "Large Meeting-house," a magnificent hall measuring 100 ft. by 85 ft., and 35 ft. from floor to ceiling. On three sides are wide galleries covering the corridors, and each is intended to hold at least 200 persons. The seats rise in tiers, thus carrying on the effect produced by the gradual raising of the level round the sides of the main floor. When the hall is full, this gives a feeling of spaciousness. The steel joists spanning the gallery fronts and carrying the flat roof are 70 ft. long and 4 ft. 2 in. in depth. With the exception of this framework for the Large Meeting-house, steel enters very little into the construction.

As the chief purpose of this hall is to accommodate the Friends' yearly meeting when matters are debated by those sitting in all



The lofty and gracious design of the Large Meeting-house is apparent in the photograph above

Below is the frontage on to Euston Road

parts of the floor and galleries, every attention has been given to ensuring good acoustic qualities. Dr. G. H. Sutherland, a well-known consulting physicist, gave his approval to the proportions of the hall, and under his advice special acoustic plaster was employed on all walls, and the seats on the main floor are upholstered and covered with rhinos leather. From the ground floor to the foot of the galleries, the walls are panelled in Austrian oak.

In the matter of light, the room is exceptionally well provided with windows, giving 12½% of full daylight in the centre; while at night the indirect illumination from a group of eight parabolic reflectors hung in the centre of the ceiling has a pleasing and shadowless effect. Quiet is secured by the height of the outer north wall which prevents the least sound from the traffic in Euston Road being heard. For ventilation slow-speed fans are placed below the platform, the air ducts, of very large area, encircling the whole floor. Due to the use of a great number of small gratings placed beneath the seats, the air change can, if desired, be in the nature of six times an hour. The fresh air supply is always filtered, and is heated in cold weather.

That is the new venue of the Institution of Gas Engineers, a building and a hall difficult to surpass in this country, and a triumph of the architect's art. For the photographs reproduced on the previous page and for certain of the information used we are indebted to the *Architectural Review*.

INSTITUTION OF GAS ENGINEERS

PROGRAMME OF ANNUAL MEETING, JUNE, 1948

TUESDAY, JUNE 8.

10 a.m.—Opening of the 85th Annual General Meeting at Friends House, Euston Road, London, N.W.1. Welcome to Representatives from Overseas. Adoption of the 85th Annual Report and Accounts (*Communication No.* 331). Scrutineers' Reports of the Ballots. Presentation of Medals.

10.25 a.m.—Presidential Address by Harold Hartley, D.Sc., M.Inst.Gas E., Deputy Chairman, Radiation, Ltd. (*Communication No.* 332).

11 a.m. to 12 noon.—Presentation and discussion of paper on "The Development of the Gas Industry in the Netherlands," by Professor G. A. Brender à Brandis, Professor at the University of Delft and President of the Vakgroep Gasbedrijven, The Hague (*Communication No.* 333).

12.10 p.m.—Photograph of the 85th Annual General Meeting in the garden adjoining the Meeting Hall

12.45 for 1 p.m.—President's Luncheon in the Lancaster Room of the Savoy Hotel, Victoria Embankment, London, W.C.2.

3 p.m. to 4 p.m.—Presentation and discussion of paper on "Gas Production in Perspective," by T. C. Finlayson, M.Sc., M.I.Chem.E., M.Inst.Gas E., Technical Director, and F. S. Townend, B.Sc.(Eng.), M.Inst.Gas E., Senior Assistant, Design Department, the Woodall-Duckham Company (*Communication No.* 334).

4 p.m. to 5 p.m.—Presentation and Discussion of Paper on "Purification and By-Product Recovery: A Review," by C. Cooper, M.Sc., M.Inst.Gas E., Director and Head of Technical Department, and D. M. Henshaw, M.Inst.Gas E., Chairman and Joint Managing Director, W. C. Holmes and Co., Ltd. (*Communication No.* 335).

8 p.m. to 11.30 p.m.—Reception and Dance in the Connaught Rooms, Great Queen Street, Kingsway, London, W.C.2. (Evening or Dinner Dress.)

WEDNESDAY, JUNE 9.

10 a.m.—Presentation and discussion of paper on "Functionalism as a Tool of Management," by C. H. Leach, M.A., A.C.A., General Manager and Secretary, Liverpool Gas Company (*Communication No.* 336).

11 a.m.—General Meeting of Contributors to the Benevolent Fund of the Institution of Gas Engineers.

11.15 a.m. to 12.15 p.m.—Presentation and discussion of paper on "A Survey of Gas Distribution Practice," by H. J. Escreet, B.Sc.(Eng.), M.I.C.E., M.Inst.Gas E., Distributing Engineer, The Gas Light and Coke Company (*Communication No.* 337).

1.45 p.m. to 6.45 p.m.—Visit by motor launch on the River Thames to the Beckton Works of the Gas Light and Coke Company. The inspection will be concerned primarily with the coke ovens in operation and the new battery of coke ovens under construction. Ladies may participate.

1.45 p.m. to 5.30 p.m.—Visit by motor coach to the Wembley Works of the British Oxygen Company, Ltd. The inspection will include the separation from air and storage of oxygen in gaseous and liquid form, the production of hydrogen and oxygen by electrolysis, the production of nitrous oxide, and the testing of gas storage cylinders. Number limited to 50. Visit repeated on June 10. Ladies may participate.

1.45 p.m. to 6.15 p.m.—Visit by motor coach to the Neasden Works of Ascot Gas Water Heaters, Ltd. The inspection will include the manufacture and testing of various models of gas water heater. Ladies may participate.

2 p.m. to 6 p.m.—Ladies' visit by motor coach to Kew Gardens. Members may participate.

THURSDAY, JUNE 10.

10 a.m.—Presentation and discussion of paper on "A Survey of the use of Gas for Domestic and Industrial Purposes, together with Factors Influencing Future Trends," by Stirling Everard, M.B.E., Manager, Market Research Section, Gas Light and Coke Company (*Communication No.* 338).

11 a.m.—Presentation and discussion of paper on "British Gas-Making Coals," by J. G. King, O.B.E., D.Sc., Ph.D., A.R.T.C., F.R.I.C., Director, Gas Research Board (*Communication No.* 339).

12 noon to 12.15 p.m.—Concluding business of meeting.

12.30 a.m. for 12.45 p.m.—Council Luncheon to the President at the Euston Hotel, London, N.W.1.

1.45 p.m. to 6.15 p.m.—Visit by motor coach to the Rotherhithe Works of the South Metropolitan Gas Company. The inspection will include new horizontal carbonizing plant, equipped with scrubber standpipes, and the modernization of the whole of the wet purification plant, with ancillary developments necessary to deal with the increased make of gas. The final output of the works will be 9.6 mill. cu.ft. of coal gas per day.

1.45 p.m. to 5.30 p.m.—Visit by motor coach to the Wembley Works of the British Oxygen Company, Ltd.

2 p.m. to 6.15 p.m.—Visit by motor coach to the Charlton Works of J. Stone and Company, Ltd. The inspection will include the casting of various non-ferrous metals and of ships' propellers of all sizes.

2.15 p.m. to 6.15 p.m.—Visit by motor coach to the Telcon Works of the Telegraph Construction and Maintenance Company, Ltd., Greenwich. The inspection will include the manufacture of land and submarine cables and of special metals and alloys for the electrical industry.

FRIDAY, JUNE 11.

VISIT TO ST. ALBANS AND WHIPSNADE.

Morning.—Gas Industry House (9 a.m.) by motor coach to St. Albans (10 a.m.).

Visits (10 a.m. to 12.15 p.m.) to *either*—

(1) Abbey and Verulamium (Roman remains) *or*

(2) St. Albans Works of Watford and St. Albans Gas Company.

Motor coach (12.15 p.m.) to Harpenden.

Luncheon (12.45 to 2.30 p.m.) in the Public Hall, Harpenden.

Afternoon.—Harpenden (2.30 p.m.) by motor coach to Whipsnade Park Zoo (3 p.m.). High tea (5 p.m.) in the Cloisters Cafe. Whipsnade Park.

Evening.—Whipsnade Park (6.15 p.m.) by motor coach to Gas Industry House (7.45 p.m.). Ladies may participate.

GAS ENGINEERS' NATIONAL GUILD

The Annual General Meeting of the Guild will be held on Tuesday, June 8, at 5 p.m. in the Large Hall of Friends House. The Guild will meet immediately on the conclusion of the afternoon session of the Institution of Gas Engineers.

The Guild has been recognized during the year by the authorities concerned as the negotiating body on behalf of senior executives in the gas industry, and its formation has been generally welcomed. It has been active in bringing before the Minister the views of senior executives in the industry upon the many important problems which nationalization has created for them. This meeting will provide an opportunity to discuss these problems and to suggest means whereby the advancement of the gas industry may be promoted and the status and well-being of those employed in it may be safeguarded in the light of the proposals now before Parliament.

A Warning that a "blackout" might be declared in parts of Nuneaton where damage to street lamps continues on a serious scale, was given by Councillor H. A. Corbett, Chairman of the General Works Committee at a meeting of the Nuneaton Town Council. He said the Committee had considered the question of the serious continued damage being done in many areas of the town and had decided that there may have to be a blackout in those areas because it was such an expensive job to replace the lanterns.

THE GAS BILL IN COMMITTEE STAGE

(*Continued from page 263*)

CLAUSE 41 of the Bill is concerned with estimates of Area Boards' requirements and allocation to them of liabilities in respect of stock. Mr. Boyd-Carpenter moved an amendment, suggesting that the control provided for the Gas Council was in the nature of that grip which the Treasury exercised upon other departments. Here, he said, in the nationalized gas industry, something was being deliberately created which looked very like Treasury control.

Mr. Gaitskell replied that it had always been recognized that the Gas Council would be the borrowing authority under the new arrangements. They considered whether each Area Board should be allowed to raise capital independently, but came to the conclusion—and the Gas Council agreed with the conclusion—that it was desirable to have one central borrowing authority. The wording of the Clause simply ensured that when the Gas Council issued stock in order to raise money for an Area Board, it was for the purpose of carrying out the programme of development which had been approved by the Minister. He would have thought that a very reasonable precaution. If they did not have those words, the possibility would arise of money being raised by the issue of stock for an Area Board which the Area Board was not going to use for some considerable time, and that would be rather wasteful.

Mr. Brendan Bracken said it would be wrong for Area Boards to be competing in the capital market, and if that happened there would not be much point in having a Gas Council.

Mr. Gaitskell continued that it might be held they were restricting the Gas Council too much in that they provided for the Gas Council to service capital only where that capital had been spent to manufacture plant or gas fittings. For example, it might be held that the Gas Council could not service stock which had been issued in part for the purchase of an office building. Their broad idea there was that the Area Boards would normally have to have allocated to them the responsibility for meeting the expenses of the Council. As they had repeatedly emphasized, the Council was, in effect, the chairmen of the Area Boards plus an independent chairman and vice-chairman. Although he was quite prepared to look at the wording in case there is any ambiguity about it, the real issue was simply a very narrow one—how far they are to provide for the direct servicing of stock issued for the Gas Council by themselves, and how far it should be serviced by the Area Boards.

Central Guarantee Fund

On Clause 43 (Central Guarantee Fund) it was proposed that a new proviso should be inserted to limit the total contributions to the central fund of the Area Boards, in any financial year.

Mr. Glenvil Hall (Financial Secretary to the Treasury) remarked that it was difficult to judge what the total amount of British Gas Stock would be outstanding at any given time. As they computed it, something like £200 million British Gas Stock would have to be issued in satisfaction of compensation. In addition to that it would be possible to issue up to another £250 million in all for working capital, cash advances, cash payments to local authorities, and so forth.

Mr. Bracken : I hope the right hon. Gentleman does not think he is carrying us with him in his estimate of £200 million as being adequate to compensate the stockholders?

Mr. Glenvil Hall went on to say that they had something like £450 million to bear in mind. At the same time it was obvious that during the first few years nothing like £250 million would be necessary. According to the Financial Resolution, and common sense, the Area Boards and the Gas Council would not raise this money if they did not need it. During the first few years the amount likely to be raised in this way would not be anything like that total. Nevertheless, they had to bear the total figure in mind, and it was possible that during the first five years something from £300 million will be needed to complete the upper limit. However, £450 million would be outstanding. One quarter per cent. of that, which was the amount suggested in the amendment, gave approximately something between £750,000 and £1¼ million. Spread over five years, that would give approximately £5 million. In the light of what the Minister said earlier, they had considered this and were inclined to agree that it would be all to the good if they accepted something like the idea behind the amendment.

Area Board's Accounts

On May 5, when answering general discussion on Clause 47, which deals with the method of preparing accounts, Mr. Gaitskell gave an assurance that before drawing up the form in which the accounts of the Area Boards were to be prepared and presented he would seek the guidance and help of the auditors of the accounts. He said he felt it would be right if the reports of the Gas Council and the Area Boards were presented to Parliament at the same time. The time between the end of the financial year and the presentation of the reports should be as short as possible, with the reports containing references to important financial policy decisions.

An Opposition amendment to Clause 46, designed to allow the Minister to fix the amount of annual depreciation to be charged by the Area Boards, was rejected by Mr. Gaitskell, who held that this matter should be left in the hands of the Boards.

Sir Hugh Lucas-Tooth asked how depreciation was to be charged for assets which totalled £90 millions, but were being taken over for about £22 millions. After Mr. Gaitskell had said he was prepared to have a word with the Chairman of the Gas Council to see if there was any need for making a uniform charge the amendment was withdrawn.

Col. Crosthwaite-Eyre proposed an amendment to the same clause to prevent Area Boards from charging capital repayments to local authorities to revenue, but withdrew it when Mr. Gaitskell promised to look into the matter.

During a discussion on an Opposition amendment to Clause 48, to permit negotiations relating to carbonization activities of the Coal Board and the Gas Area Boards to be conducted through the Gas Council, Mr. Bracken described the Coal Board as "a disorganized bureaucracy," and said it was "the greatest of all power misers in this country."

Mr. Robens, Parliamentary Secretary, Ministry of Fuel and Power, deprecated "this unwarranted attack." He maintained it was grossly unfair and was a reflection on the whole industry.

Mr. Gaitskell would not accept the amendment, but agreed to talk the matter over with the Chairman-designate of the Gas Council to decide the best method of overcoming the difficulty. After further discussion, Mr. Robens gave an assurance that on the Report stage the Minister would present an amendment.

The Opposition pressed to a division—lost by 16 votes to 10—an amendment to Clause 49, charging the Minister to make public the results of any inquiry into the supply of gas to an Area Board.

Sir Frank Soskice, the Solicitor-General, rejected the amendment on the ground that if the finding was to be kept private the person making the inquiry would give frank reasons for his views, but if the finding was to be publicised he would be more guarded.

Opposition speakers maintained that it was in the public interest to make the information known.

On Clause 49 the Parliamentary Secretary to the Ministry of Fuel and Power said he wanted to make it plain that the Bill did not make a complete monopoly of the gas industry.

In discussion on Clause 50, which deals with charges and tariffs, Sir H. Lucas-Tooth thought it might permit Area Boards to give preferential treatment to Government bodies, while Mr. Pitman deprecated that there were no general principles upon which charges should be made. Col. Elliot thought this part of the Bill would most closely affect the public. He placed little reliance on Consultative Councils as the chairman was appointed and paid by the Minister. Mr. Brendan Bracken declared that there would be opportunities for political favouritism, and added : "We feel this clause will lead to dear gas, add to the cost of exports and raise the cost of living."

In answer to these and other points, Mr. Robens said there was no intention that there should be preferential treatment to socialized industries. He promised that consumers would be given early and adequate notice of regulations for altering charges, but the Area Boards must be allowed to make their own decisions as to charges.

Mr. Robens said he would like to see meter rents abolished entirely and the gas charge made to cover them.

When Mr. Robens moved the closure on the Clause, the Opposition pressed for a division and they again divided the Committee on the motion that the Clause stand part of the Bill.

The Opposition twice divided the Committee to press amendments, which were lost, to Clause 53 which deals with the effect on Area Boards of the gas supply code and enactments.

Mr. Brendan Bracken said that the Opposition wished to put down many more amendments which, he hoped, could be tabled in manuscript form and the Chairman, Mr. J. Diamond, said he would accept manuscript amendments.

Incentives

On Clause 54 (machinery for settling terms and conditions of employment), Mr. I. I. Pitman moved inclusion of the words "including arrangements whereby incentives to increased efficiency, output, and economy shall be provided." The purpose of the amendment was to ensure that the Gas Council and Area Boards

(*Continued on p.* 337)

IN PARLIAMENT

On April 22, the Member for Hornsey asked the Minister of Fuel and Power (1) how many chief engineers and senior technical officers previously employed by electricity distributing companies and local authorities will not be taken over by the British Electricity Authority, and what terms of compensation they may expect to receive for the loss of office; and (2) on what date he proposes to issue regulations on compensation, required under Section 55 of the Electricity Act, 1947. In addition, the Member asked what had caused the delay in dealing with this matter since the passing of the Act. Mr. Robens stated that it was not yet possible to say how many of the officers in question might be redundant, but the British Electricity Authority had advised him that the number was likely to be small. He could not say when the regulations would be laid, because they had to be discussed first with the representatives of the associations and unions catering for employees in the industry. The Member followed up that answer by requesting information as to when the regulations were likely to come out, as they would affect the livelihood of a large number of people.

It was reasonable, said Mr. Robens, to give an opportunity to the Employees' National Committee which represents all the interests, to discuss the draft regulations. Mr. Gammans: "Will the Parliamentary Secretary say, then, if any officer has been stood off without compensation?"

Mr. Robens: "As the terms of compensation have not yet been made known, that obviously may have happened, but I should have to have notice of the details of any case."

LIQUID PURIFICATION PLANT AT LINACRE

The Ministry of Fuel and Power have given permission to the Liverpool Gas Company to install at their 20 million cu.ft. per day Linacre Works a liquid purification plant capable of dealing with 4/5 million cu.ft. per day. The offer of W. C. Holmes & Co., Ltd., to supply and install this plant has accordingly been accepted by the Directors.

The plant, which is based on the "Manchester" process, is being installed so that its behaviour with various types of gas can be studied, and, if necessary, experiments can be carried out to modify it to suit all the conditions. The site chosen for it is extremely suitable for this purpose, and allows the plant to be supplied with: (a) Straight horizontal gas of 4/5 million cu.ft./day; (b) horizontal gas plus producer gas 4/5 million cu.ft./day; (c) gas from continuous vertical retorts 4/5 million cu.ft./day; or (d) carburetted water gas of 4/5 million/day.

The plant is arranged so that at a later date a catalytic organic sulphur removal plant can also be installed. Initially the plant will be followed by oxide purifiers, the installation of which was extensively damaged in the war, but will still be serviceable for the anticipated experimental period.

The Company consider that apart from the savings in material used in constructing these wet purification plants, the improvement in working conditions for the operatives and local atmospheric conditions should be sought since there are so many works sited in built-up areas. Lastly, if the plant is found to be completely successful under all the conditions under which it is tried, the existing boxes can gradually be scrapped.

A photograph of officials of the Sheffield and District Gas Company, taken during the visit of the Yorkshire Junior Gas Association to Sheffield on April 29. Left to right: Mr. F. Wilkinson, Mr. W. R. Oliver, Mr. R. C. Croasdell, Mr. H. Kenworthy, Mr. Norman Smith (Editor, "GAS JOURNAL"), Mr. J. Bateman, Mr. J. R. Martindale, and Mr. G. Banks, Hon. Secretary of the Association.

Shown above is a group of Birmingham Gas Department personnel with some members of the British Gas Council Industrial Gas Development Committee at the Council's stand at the B.I.F., Birmingham: W. D. Dieterichs, Chairman of the Committee, is seated; standing, left to right, are J. F. Waight and F. Sammerton (Birmingham), Miss Lilian Buckland (Secretary of the Committee), C. Warrenne (Exhibitions Officer, British Gas Council), J. Palser and H. R. Hems (Birmingham), and A. C. Jennings (Sheffield).

CONSOLIDATION AT SWINDON

The Minister of Fuel and Power has signed a Special Order amalgamating the interests of all the companies under the Swindon United Gas Company under the one Company of that name, of which Mr. C. H. Chester, Junior Vice-President of the Institution of Gas Engineers, will continue to be Director, General Manager, and Secretary.

The interests concerned are the Swindon and District Gas Corporation, Ltd. (Fairford Branch), Cirencester Gas Company, Marlborough Gas Company, Hungerford Gas Company, Ltd., Hungerford Gas Company, Ltd. (Lambourn Branch), Wootton Bassett Gas, Coal, Coke and Fittings Company, Ltd., Faringdon Gas Light and Coke Company, Ltd., Highworth Gas Company, Ltd., Bampton Gas Company (Oxon), Ltd., and the Cricklade and Purton Gas Undertaking. All the Companies have now gone into voluntary liquidation, including the holding company, Swindon and District Gas Corporation, Ltd. This Special Order completes a scheme of amalgamation commenced by the Company with the approval of the Ministry, prior to the war.

EASTERN TAR BOARD'S ACTIVITIES

Surveyors and Divisional Engineers from many parts of the Eastern Area thronged the demonstration theatre of the Cambridge University and Town Gas Light Company on April 24 at the invitation of the Eastern District Tar Board of the British Road Tar Association. The occasion proved an auspicious opening for a series of similar meetings which are to be held at Norwich, Ipswich, and Peterborough. Mr. Hunter Rioch (Managing Director of the Cambridge Gas Company) presided as Chairman of the Eastern District Tar Board, and was supported by Mr. R. A. Weston (Deputy Chairman), Mr. W. Collins Garrard and Mr. H. R. Thomas (Members of the Executive Committee), Mr. E. H. Winch (Secretary), and Mr. P. S. L. Lee (Travelling Representative, British Road Tar Association).

The film, "Surface Dressing with Tar," which was produced by the Central Office of Information and the Department of Scientific and Industrial Research, in conjunction with the British Road Tar Association, was given its *première* in the Eastern District, and will also be shown at the other centres in the near future. This film proved of absorbing interest to those who are concerned with the provision and maintenance of a high standard in road construction and maintenance. It is based on the latest findings of co-operative research and illustrates the principal factors in the production of good surface dressings and the most modern methods of application.

The Chairman invited questions, to which both he and Mr. Lee replied, and the answers which were given, together with the expressions of opinion, and examples of personal experiences in the preparation of tar and in highway maintenance combined to make this meeting one of considerable value and importance. Before the meeting adjourned for tea, a vote of thanks was accorded to Mr. Hunter Rioch, Mr. Winch, and Mr. Lee, on the proposition of the County Surveyor, Mr. F .L. Bayliss.

UP AGAINST IT

[*FROM A SPECIAL CORRESPONDENT*]

"Considering possible additional loads we have come to the conclusion that probably the most favourable prospect lies in the development of intermittent water heating. This potential market is substantial. It might, in time, equal the present cooking load." Report of the Committee of Enquiry (Heyworth Report), 1945.

DESPITE all the individual and conjoint representations of the British Gas Council and the water heater manufacturers, a further fantastic purchase tax imposition has been levied by the powers that be. This appalling burden of 100% tax is the reply to all those logical and economic factors so painstakingly presented for the consideration of the Chancellor of the Exchequer in justification of a completely reasonable request for the cancellation or, at least, alleviation of, the pre-Budget tax of 75%. In actual fact, was the practical consideration desired ever given?

Increased revenue through taxation does not make sense; arguments about conservation of fuel are equally pointless. Nor can any valid argument be contrived in respect of inflation, shortage of materials, direction of labour, gas loads, and the like. There is a sufficiency of existing deterrents which effectively militate against the sale of water heaters without the further infliction of purchase tax, of which decreased purchasing power, licensing restrictions, price of gas, installation costs, and ancillary fittings shortages are but a few examples.

What logical conclusions, therefore, can be formulated to justify this staggering blow at the instantaneous water heating load for gas?

The neat and tidy thinking of the Chancellor understandably favours the scaling of purchase tax into as few as possible neat and tidy sections, which, admittedly, helps to simplify bookkeeping. But surely this alone does not qualify the act which projects water heating into the 100% class on a par with jewellery and mink coats, so that the customer may choose between a pearl necklace and a sink heater. The electricity industry has been in trouble for some time past, is still in trouble, and is likely to remain so for some years to come until the load factor has been equalized to cope with the recent exuberant manufacture and distribution of electric appliances. For the time being no official discrimination will be made in favour of gas so that, *nolens volens*, the gas industry must suffer for the deficiencies of the electricity industry. The situation smacks of a thirsty man presented with two wells, one of which is unable to satisfy the demands already placed upon it by other consumers, while the remaining well—although full to overflowing—remains sealed to all comers.

A Sorry Prospect

In the meantime what is going to happen to the gas water heater manufacturers? The manufacturers will be forced out of business, since the economics of distribution and production are no longer tolerable. And remembering the two million appliances already installed, what can be expected as far as essential replacements and spare parts are concerned? These very manufacturers have fulfilled their obligations to the gas industry in the past by creating a market and providing a before, during, and after sales service. All this should continue; but it is doubtful whether it will do so, for it is no longer a practical proposition. Who among us are so optimistic as to expect the future maintenance of publicity, technical advice, design and development progress, and other contributions given so freely in the past by those responsible for water heater production?

Unless some practical solution is speedily found, the gas industry may well be forced to permit the water heating market to stagnate. The electricity industry may, in fact, not merely cut a piece of cake but seize the whole market. Was it not significant that 315,000 electric water heaters were produced in 1947 as compared with 194,000 gas water heaters?

The Question of Survival

If it is the intention of the Government to stop production of gas water heaters then surely they should say so. How many years are needed for the satisfactory load development of electricity? Some say ten and others say never, for no power station in this country can ever be equipped to deal with, for example, a sudden influx of 50,000 two-bar fires due to an unexpected cold spell. In such circumstances the future for the water heater manufacturers becomes imponderable; that he may go broke in the event is clear, but it would be good to know just how long the tragic demise will take. It is possible to survive by existing on capital—a justifiable effort if it can be determined without any delay when there will be alleviation of purchase tax. Alternatively, productive capacity outside the water heating field will have to be adopted.

If water heating by gas is regarded as a luxury, then little or no attention can have been given to the official memoranda presented by the British Gas Council. Such an opinion must be based on a complete lack of sympathy for the health of the community in a country which is lamentably backward in the proper utilization of this simplest of all commodities.

There is an expression used by our American friends known as "beating the rap," and it is a slogan which might well be used with advantage by the gas industry in applying ways and means to preserve the hot water load over an indeterminate stormy period. Active representation continues to be made by the manufacturers and executive bodies within the gas industry, but this is not enough. Every gas association should immediately formulate an official protest to Government quarters and every member should interest his local M.P., utilizing the contentions so ably presented by the British Gas Council. Prominent personages who represent the voice of the public should be approached. Women's organizations should realize that the promised relief on domestic appliances does not extend to water heaters. Other aspects involve imaginative salesmanship which is at once constructive and remunerative.

Hire Purchase and Simple Hire

Many undertakings, fully alive to the serious implications of the situation, are already formulating simple hire and hire purchase programmes covering three, five, and even seven year periods. In some instances the recovery of the tax is confined to the first twelve-monthly payments, the capital investment on the appliance and installation being subsequently recovered over the remaining period. Alternatively, there are five-year schemes which make no bones about it and spread the full charge over that period. Simple hire direct to local authorities would also do much to ease the burden of restricted maximum costs concerned with new dwellings, conversion of existing properties, and renovations. That is a gilt-edged investment and sound banking policy. Broadly speaking the whole question of simple hire and hire purchase presents the one logical solution to the problem. Let us co-operate and subscribe individually and collectively, imaginatively and practically, in devising ways and means to defeat the burden of taxation.

If the gas industry will now embark upon a clearly defined resistance movement and make an effectual contribution to the essential survival of the manufacturers and the load itself, then the future can be assured. The alternative is dismally apparent.

A FINE ENGINEERING RECORD

The Widnes Foundry & Engineering Co., Ltd., has produced an excellent book describing its long history, a book rich in illustrations and of great interest to the engineer.

Thomas Robinson, born in 1814, became a blacksmith's apprentice, rose to the position of journeyman blacksmith, and eventually founded with his uncle Robinson & Cook, engineers and ironfounders, in St. Helens. The firm commenced business in 1841 and undertook mainly blacksmiths' work, but Robinson proved himself a prolific inventor of machines and methods of moulding and casting. So successful was the concern that in 1847 it became necessary to centralize the expanding departments at the Atlas Foundry. The chemical works of Widnes and those of the neighbouring town of St. Helens (which had become the centre of the soap, salt, and soda industries of this country) developed with extraordinary rapidity during those early years of the foundry, and it became necessary to build a large manufactory in Widnes to handle the swelling volume of engineering work. The Widnes Foundry started up in 1861, and its work was concerned primarily with chemical engineering; Thomas Robinson took an active interest in the firm until his death in 1901. The 1914-18 war brought a change of work and the firm produced a variety of plant for the manufacture of high explosives, and such goods as light railway sleepers, steel trench covers, &c. The slump years which came about after 1920 affected the business, as most others, but, in 1936, the foundry was greatly extended and shortly after the outbreak of World War II some 15,000 sq.ft. of additional floor space were made available; extra overhead travelling cranes were installed, including two of 30 tons capacity. The list of equipment produced during the war is too long to detail here, but it included Bailey bridges, gun settings, prefabricated ship units, and many similar items. To-day the firm is "ready for anything," as a perusal of this published history will indicate.

Gas and Electricity in Switzerland

[SPECIALLY CONTRIBUTED]

THE Monthly Bulletin of the Swiss Gas and Water Association contains a report of a talk by E. Choisy, President, Services Industriels de Genève. The speaker recalled how, since the middle of last century, the demand for power had increased. Thanks to this development it had been possible to shorten the working day considerably [1850: 70 hours work per week, 1940: 40-48 hours per week], and to decrease human effort.

The sources of power, he continued, vary in amount and kind from one country to another. Russia and the United States, for example, have considerable sources of all kinds of power at their disposal, including raw materials for the production of atomic power. Denmark, on the other hand, is one of the poorest countries in this respect, without minerals and without water power. Of Swiss power demands 27% can be met from her own wood and water. The remaining 73%—pre-war basis—have to be imported in the form of coal and liquid fuels. If, during the next 30 years Switzerland can increase her water power from 10 milliards kWh per year to 20 milliards—which appears to be a maximum—her imports of fuel cannot be decreased. It can, in fact, be predicted that the demand for fuel will increase with the capacity to produce more. Irrespective, therefore, of all efforts to utilize more fully the local sources of power, three-quarters of the fuel needed will have to be imported.

A Key Industry

The gas industry in Switzerland started about 100 years ago, had 53 gas-works in 1883. By 1915, that number had risen to 101, and dropped to 75 by 1938. This drop is due to the fact that several plants were serving a "grid." Technical improvements between 1916 and 1938 are illustrated by the following figures: Increase of coal consumption only 15% as compared with an increase in gas production of 40%; 15% increase of coke for sale, and 16% of tar.

Coke is used not only as fuel in homes and factories, but is a raw material for the chemical industry and cement factories. Tar is the basis for a great number of chemical products. The chemical industry in Switzerland employs 25,000 workers, and produces one-quarter of the total export; from this can be gathered the national and economic importance of this field with which the gas industry is connected.

To show the importance of the gas industry in Switzerland as regards foreign trade it should be noted that ,in 1937, Swiss gas-works paid 22 million francs for imported coal. But the by-products alone which were obtained from this coal constituted a value of about 20 million, and without the gas industry this sum for indispensable raw materials would have had to be paid to foreign countries. Thus, the gas industry is by no means a liability; moreover, it put at the disposal of the country, in 1937, 260 million m³ of gas. These figures show that the gas industry is indispensable in utilizing the necessary coal imports. It is one of the key industries of Swiss national economy. Ninety per cent. of the industry is under public ownership.

M. Choisy detects a similar development in three stages in the electrical industry. At present a stage is beginning where high frequency current is used for broadcasting and television. In these and in some other spheres there is no substitute for electricity; demand is likely to increase and there will always be a shortage of electricity. It has been shown that both the gas and the electricity industry still have to be developed to secure the well-being of the country. The task, therefore, is to use both kinds of energy well. A fruitless fight between the two must be avoided; both have in front of them wider fields of application. It appears desirable to fix a maximum limit for coal imports. Such a policy may result in Swiss wood and imported fuels being used for heating, the latter mainly in the form of coke and gas. Electricity would be confined to fields where a saving of large quantities of coal can be effected.

Nationalization

How can gas and electricity be co-ordinated? To nationalize both would be a solution to which the author is opposed. He suggests that the ablest men of the Swiss Electro-Technical Association and the Swiss Association of Gas and Water Engineers should form a commission to study problems of co-ordination. Co-operation would have better results than rivalry, without the intervention of the State. Hand in hand with this should go efforts to enlighten the population, contractors, architects, and industrialists about fuel supplies. The *Section Commerciale* of industrial undertakings was even now carrying out such work at Geneva, in regard to both gas and electricity.

I.G.E. Associate Membership Examination

New Regulations

THE Institution of Gas Engineers has published the Education Regulations, 1948 Revision (Communication No. 330), containing information relating to the courses of training and to the examinations that are available in connexion with the technical work of the gas industry. In particular it contains, for the first time, details of the rules and syllabuses of the new Associate Membership Examination, which have been prepared in consultation with the Institution of Civil Engineers.

The Associate Membership Examination itself consists of two parts; the first being the Joint Section A Examination of the Institutions of Civil and of Electrical Engineers, and the second being the Joint Section B, Group VIII Examination, conducted by the Institutions of Civil and of Gas Engineers. The first of these is concerned with ancillary subjects essential to the training of an engineer, irrespective of the particular branch or branches in which he wishes ultimately to specialize. The second part consists of Gas Engineering (Manufacture) or (Supply), and Applied Chemistry, which are of particular interest to the gas engineer, together with Engineering Drawing and Engineering Materials.

Although the standard in these ancillary subjects will be generally of a higher order, their nature will not differ markedly from that of the ancillary subjects at present associated with the Higher Grade Examination in Gas Engineering (Manufacture) or (Supply), and the same fundamental subjects are included.

In the following Table the ancillary subjects required for the new Associate Membership Examination and for the present Higher Grade Examinations in Gas Engineering (Manufacture) and (Supply) are compared:

Associate Membership Examination	Higher Grade Gas Engineering (Manufacture)	Higher Grade Gas Engineering (Supply)
*English		
Mathematics	Mathematics	Mathematics
Applied Mechanics	Mechanics	Mechanics
Applied Heat (with Light and Sound)	†Physics	Physics
Principles of Electricity	Electrical Engineering	
Theory of Structures *OR* Theory of Machines		
Engineering Drawing	Machine Drawing	Machine Drawing
Engineering Materials		
Applied Chemistry	Inorganic Chemistry	Inorganic Chemistry
Thermodynamics and Heat Engines *OR* Metallurgy *OR* Heating and Ventilating *OR* Hydraulics	†Engineering Science	Engineering Science

* Unless taken in the Common Preliminary Examination.

† Alternative subjects for Gas Engineering (Manufacture).

It will be noted that students in Gas Engineering (Supply) will be required to take Principles of Electricity, a subject they were not previously required to take. In view of the increasing association of electrical equipment and instruments with gas utilization, particularly in the industrial field, this additional requirement is considered desirable. They will also be required to study one of the alternative subjects, of which Heating and Ventilation or Metallurgy are likely to be of value in connexion with large scale commercial and industrial applications of gas.

Copies of the Regulations containing details of the dates when the new scheme will become operative may be obtained, free of charge, from the Secretary, Institution of Gas Engineers, 1, Grosvenor Place, London, S.W.1.

Technical Staff Members of the local gas undertaking played a leading part in the creation of a new Blackpool and Fylde Branch of the Association of Scientific Workers, the inaugural meeting of which was held recently at Blackpool. Almost all the technical staff concerned have become members of the new branch which includes scientific and technical personnel engaged in other occupations. The A.Sc.W. is a scientific and technical workers' trade union affiliated to the T.U.C. It is probably unique among trade unions in that in addition to dealing with the economic welfare of its members, it aims to secure the fullest utilization of science for the benefit of the people as a whole.

SALES AND SERVICE ORGANIZATION*

FOR THE SMALLER GAS UNDERTAKING

By Lieut.-Colonel P. G. WRIGHT, Assoc.M.Inst.Gas E.,
Sales and Service Manager, Uxbridge and Slough Gas Companies

IN speaking of the "smaller undertaking" the writer pictures a provincial town with its surrounding villages. Such towns may contain say 50,000 to 100,000 inhabitants or from the point of view of gas output, range from 500 to a maximum of 1,000 million cu.ft. per annum. The tasks facing the management of such an undertaking are often not understood by the personnel of the very big undertaking who are naturally more specialized and generally more efficient in their subjects. They may not realize that the manager of the undertaking, which they thought so old fashioned, was having to wrestle with out-of-date works plant at all hours of day and night, and probably trying to look after his sales and service organization personally. Similarly the personnel of a small undertaking are apt to think that a departmental manager in a big undertaking has merely to press a button in order to get results.

That the sales promotion, and especially the service, given by many smaller undertakings is thoroughly bad, cannot be denied. Nor can it be denied that the service given by the very big undertakings is generally quite good. However, certain of the smaller undertakings can, and do, give really superlative service, because, copying all the good points and standards from the big undertakings, they have added a more personal and direct touch, due to the fewer number of people dealing with each job. They can also apply new ideas more quickly.

The whole approach to sales varies enormously between companies, although even the most ineffective piously agree on more or less the same ultimate standards. The cost of service to consumer varies between companies in no apparent relation to the standard of service given, but mainly due to varying policy in charges and efficiency in work. In one set of comparative figures examined a year or so ago, the cost in pence per therm varied from 1.46d. to a low of 0.15d. and an average of approximately 0.8d. These costs are very much higher now, but the variation still remains.

The war showed particularly that the secrets for success depend firstly on having a clearly defined objective and task understood by everyone, secondly on developing the morale of all personnel to attain this object, and, thirdly, on training.

The task ahead of the new Area Gas Boards when they have to define the detailed sales and service policy is immense, so, in considering plans to revivify the imaginary undertaking, where policy questions arise, a tentative solution is set down. Although the guiding principle of reorganization under nationalization will be to provide the best service to the public as cheaply as possible, it is to be expected that it will cost money, time, and effort to raise the standard of many small undertakings to the height needed to maintain the health of the industry as a whole.

It is interesting to note that at the present time only 33 undertakings have an output of over 10 million therms per annum. There are 37 with between 5 and 10 million; 140 with between 1.25 and 5 million; 162 with between 0.5 and 1.25 million; and 566 not exceeding 0.5 million therms per annum. The importance of the small unit in maintaining good-will is therefore vital.

The First Objective

The first objective of a sales department is to sell all the gas and perhaps by-products, which can be produced by the available plant, at such a price as to cover all costs and show a profit. Factors affecting this are, of course, the type of load, the capacity of the distribution system, and the need to sell at as low a competitive rate as possible. The second objective is to sell gas burning appliances in such a way that they are used to the best advantage, not only of the user, but also of the gas production plant. For the sales organization, a clear policy, simple tariffs, and an efficient staff are needed.

The objective of the service department must be to ensure that all gas burning appliances are properly fitted and maintained in working order. Both departments have to work together in helping each other and particularly in showing the public that gas is the best fuel available.

If these definitions are agreed, Why is the man responsible for these functions in so many smaller undertakings called the "distribution superintendent," a term which does not describe his job to the public unless he is primarily concerned merely with the distribution mains and considers sales and service his secondary function?

For clarity, therefore, the following terms are suggested:—

Distributing Engineer—responsible for mains, services and holders.
Sales Manager—in charge of Sales Department.
District Sales Representative—in charge of Sales for a District.
Industrial Sales Representative.
Showroom Sales Representative.
Service Manager—in charge of Service Department.
Sales and Service Manager—in charge of both Sales and Service Departments.

There seems a great need to use "standard terms" within the industry. For instance different companies now talk about a coin operated prepayment meter as "Auto," "Slot," "Prepayment" or "PPM." Can we not agree on one term? As coins have to go in a "slot" perhaps this is the shortest descriptive term. Mr. R. N. Le Fevre's book "The Manual of Gas Fitting" —Walter King—besides quoting many incorrect terms now in use by Service Departments, sets out sensible and standard descriptions which could and should be used. For instance "primary" and "secondary" meters instead of "main" and "credit."

If a district sales representative has 3,000 consumers to care for he should easily be able to handle all his request calls and carry out examination visits. However, if 3,000 consumers are taken for the basic unit of the service organization it proves to be rather too small. Geographically, districts also vary enormously; 3,000 consumers in the centre of a town may take up less than a square mile, whereas in the country they may be spread over 25 square miles.

However, it is usually possible to fix a district of convenient size, say 5,000 consumers, which can be made the direct responsibility of a sales representative backed by a service foreman and a team of fitters. Both must be able to call in expert helpers such as the industrial sales specialist or extra fitters to do special work. The aim and object of this district unit is to build team spirit and preserve a personal contact with the consumers. Nothing is more annoying to a consumer than to have to deal with a succession of different people, each of whom may give a different opinion or advice.

The next convenient unit seems to be one of not more than three or four districts, say 15,000 consumers, or an average sized town. At this level specialist help can be applied; and for sales, the senior sales representative may be the industrial and/or builders' representative.

The district representative's area is his command. Even if there is a huge factory in it, the industrial representative should work with the district representative who can see that the "domestic" work is properly done and maintain regular contact.

The role of the district service foreman (or representative) primarily must be to see that the practical work on the district is properly and efficiently done. He must not be allowed by the district representative to spend time dealing with consumers when he ought to be controlling training and leading his fitters or taking his own coat off to do practical work. Preferably he should rank under the district representative, or if age and personality make this difficult, as a junior partner. If the pair cannot work together in harmony, one must go.

Sales policy is seldom written down and this seems a grave omission. Every employee in contact with the public, even meter readers and collectors, should have particulars of tariffs, the standard charges for fitting work and the policy about appliance sale or hire. These questions can usefully be incorporated in a simple loose-leaf book of instructions or "Standing Orders." The danger of this is the issue of too many instructions, but by careful control of distribution, making sure obsolete instructions, especially lists of prices, are withdrawn when out of date, they have the effect of giving staff confidence because they have the authority of the written word beloved by so many who are afraid to take responsibility.

In the district unit considered it is obvious that both the representative and the foremen need a clerk to do their paper work. If the same man can do it so much the better as it keeps the team compact. In practice it seems that two clerks can serve three representatives and one clerk serve two foremen.

The Need for a Budget

Before starting to make any alterations it is valuable to get up-to-date facts and figures, and then to work out short and long term plans based on a budget. Such factors as the alterations to buildings, transport renewals or additions, and the programme of training have to be set out in their proper order. Information

* Abstract of Paper presented to the Southern Association of Gas Engineers and Managers (Eastern District), April 27, 1948.

about the future plans for the district is essential, and much can be learned from the statistics available from the census which show trends in population figures and the way people live.

It is suggested that the following figures can be obtained without much trouble.

From Census (directly)—1. Population total figure with increase or decrease. 2. Average age. 3. Number of houses and institutions sets out in a form showing number of rooms and families.

From Local Authorities—Future building plans and developments.

From Undertaking—Number of consumers, tabulated according to therms per annum; slot; ordinary; average consumption and total consumptions; unaccounted for gas % over period of years; number of meters in age groups, *e.g.*, under 5 years old, between 5-10 year, &c.; any readily available figures about appliances known to be installed, especially black cookers.

From Supply Undertakings or Summaries in Trade Journals—Number of electrical consumers; any available figures giving numbers of installed electrical appliances; full details of the tariffs offered.

Next to consider is a basis for the budget of the sales and service departments. As it is customary to credit profit on sale of appliances and chargeable work against the cost of service to consumer, the cost of such service in terms of pence per therm is not a very satisfactory figure for comparative purposes. Very large industrial consumptions may make such figures false and the results set out below for four different companies show how difficult it is to decide on a fair budget figure.

It has always been an ideal of the writer for the sales and service departments to be treated as if they were independent business units responsible for making a profit and making internal charges for the services they have to provide free to customers. However, the bookkeeping involved does not seem worthwhile, but it is a pity that some of the differential charge paid by "slot" consumers cannot be credited to "service to consumer" to pay for the service provided.

A report published by the North London District British Gas Council Salesmen's Circle, dated Jan. 8, 1947, makes useful recommendations for a consumer record system and points out that only 62% of the 67 undertakings approached admitted keeping centralized records.

Personnel and Morale

The smaller the undertaking the more essential it is to have the right man in the right job, and it is fortunate that the type of man in such places is generally so good and so responsive to training and encouragement when given to him. In the survey the "nature and fashions" of the men should have been discovered. As the most important thing from a man's point of view is his pay for work, this must next be examined.

The Fitters' Classification Scheme provides a way for men to be paid according to their ability but it is surprising how badly this scheme can be applied in small undertakings. Many men hold grades without test qualification because no facilities for training or for testing had existed in the past. Many are paid more than their actual qualifications and work warrant and others deserve more. To put this right, training is required to ensure that a man paid as first grade really can do first-grade work, and so that younger men can be given every chance to progress in knowledge to their own and the undertaking's benefit.

As it is essential for a foreman to be a fully trained and technically qualified man, as well as a leader, some incentive has to be provided to make it worth while for him to obtain recognized qualifications, at least as high as any fitter under him. The most useful are the City and Guilds Certificates in Gas Fitting. If a scale is published which shows an increase in pay when the man starts studying and then as each grade is passed, it usually provides the needed incentive. For men in remote districts permission to sit for examinations as external students can be arranged.

It always seems harder for a man to take promotion and lead men with whom he has worked than for him to take charge of a fresh unit who will start by giving him the respect due to a stranger. When it is found that fitting standards are low and considerable training is needed it is both helpful and wise to discuss future plans with the district representative of the men's Union. He should be as anxious as anyone to see standards raised and men's qualifications improved, and can often be very helpful in recruiting students from nearby undertakings to attend evening classes if it is necessary to start new Gas Fitting classes under the aegis of the Local Education Authority.

One of the most important parts of the Fitters' Classification Scheme is the Apprentice Training Period. In the past, boys joining a small undertaking have had no organized training, merely working with a fitter and eventually reaching journeyman status.

For the sake of the industry—however small the undertaking—when a boy is 16, or sooner, a decision must be made, whether he is to be properly indentured as an apprentice fitter, in which case his pay is on a percentage basis of the fitter's rate—or if he is not worth training, he remains paid on a percentage basis of the labourer's rates.

At Slough and Uxbridge an experiment has been tried in forming small joint consultative councils at each depot, consisting of three fitters nominated by the fitting staff and three foremen, or representatives, under the local sales and service supervisor's chairmanship. Their terms of reference are to discuss all new ideas likely to give better service, taking care not to deal with matters normally handled by the Works Committee or any question of wages. It is a legal requirement that records be kept of disabled men employed on the staff.

It would seem that there is room for some incentive system in the service department to speed work, providing control of quality can be maintained. It is simple to apply a bonus on repetition work such as exchanging appliances or piping new houses, but difficult with any other work. If such a scheme can be worked out it might save non-productive effort now needed to make sure men are working properly and it seems the only sure way to get an increase in work per man hour. The time taken to do a standard job in 1948 seems generally to be far greater than it was in 1939 and shortage of fittings cannot be the sole cause. A cure has to be found other than the threat motive.

"Monty's" Example

Field Marshal Montgomery prepared his armies for their success by thorough training and particularly by raising their morale. It is interesting to see that his Chief of Staff considers the qualities of a great general to be:—To know his "staff" thoroughly; to be known and recognized; to ensure that troops are given tasks within their powers; that success makes mutual confidence and failure the reverse; to see that subordinate commanders are disturbed as little as possible; to command by personal contact; and to be human and study the human factor.

The spirit of employees at their work is all important and how rarely do we find that happy and proud atmosphere which can be sensed on entering some works or depots. A place where everything is spick and span and men proud to wear their firm's uniform cap.

A little whitewash, paint, and cleaning can do much to raise morale and the effort needed to prepare premises for a Director's inspection is well worthwhile. This probably all sounds too much like Service spit and polish to be accepted by many people, but a lot can be learned from Service methods, especially those used for raising the spirits of the men.

A sports club besides providing recreation should give foremen and supervisors a chance to get to know their men as individuals. One fitter, a member of a team visiting another undertaking, said afterwards "They must be a good company, their manager plays cricket for the team." An interesting reaction, which seems to point the moral that active participation by the management is wanted if the club is to be good.

A house magazine, even a broadsheet, for a small company is a very helpful way for telling all the staff the aims and objects of the undertaking, especially sales policy. It also promotes the family spirit.

Training

With the aim of making fitters first-class all round mechanics in gas appliances, and the district representatives competent salesmen and technical advisors, a survey of staff should portray the training needed. This probably divides into several types such as refresher and upgrading training for working fitters; specialist courts in particular appliances such as refrigerators and water heaters; training of apprentices; and special training for supervisors and representatives.

One danger in applying a training programme is that of starting at the bottom, because then, for example, a fitter may return from a refresher course and find that he knows more than his foreman. Mutual confidence is destroyed and everyone feels uncomfortable. To avoid this, training should start at the top, not necessarily in the great detail required by the mechanic, but enough to give a supervisor confidence.

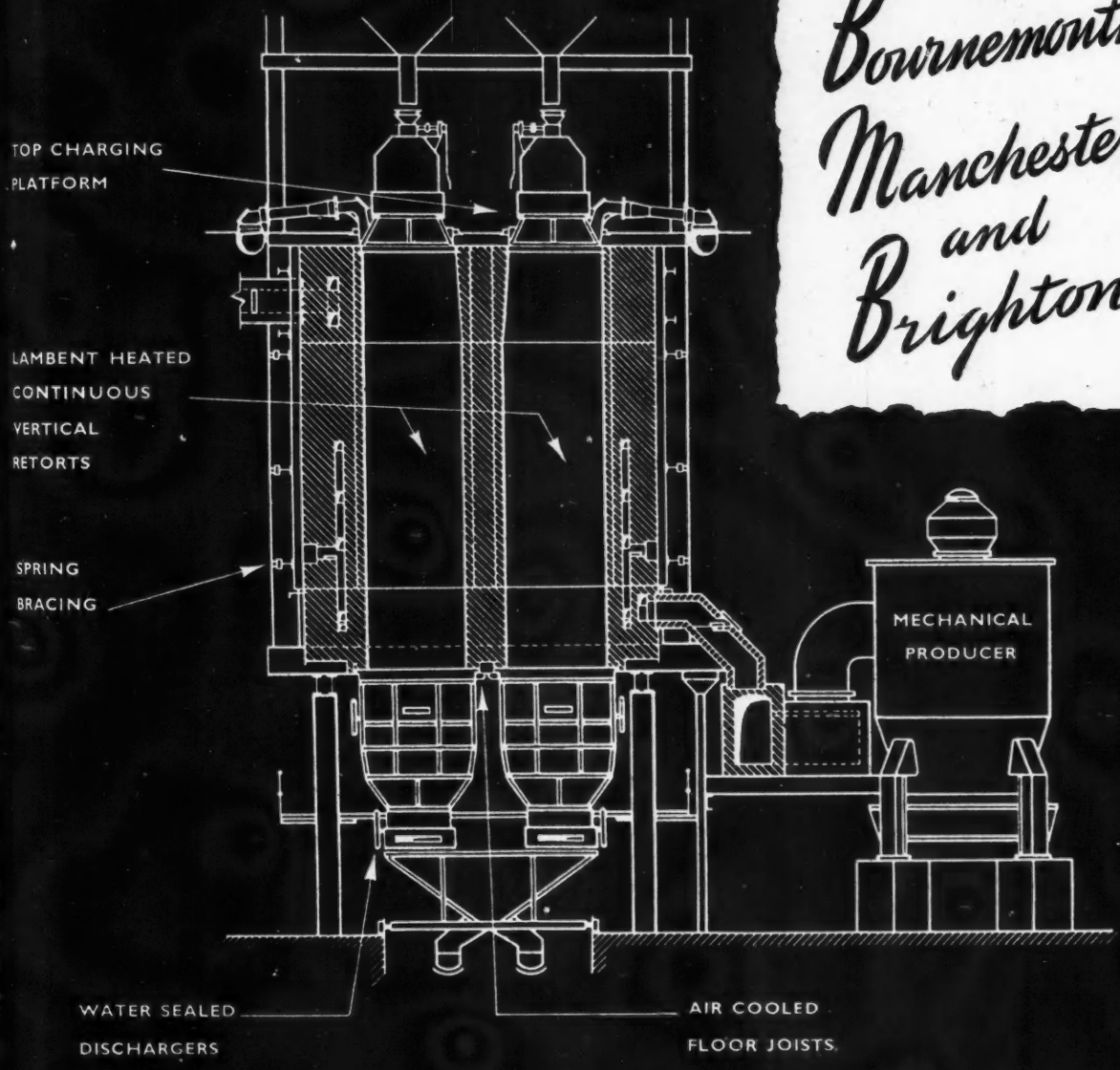
There are, moreover, certain qualities required by any man in charge of others which may need development. They are the ability to teach or explain clearly, the ability to handle his men with sympathy and firmness, and the ability to organise his work economically. Some have all these qualities as natural gifts, but the majority can learn more about them.

The Ministry of Labour's scheme for Training Within Industry (T.W.I.) aims at improving production first by improving the work of supervisors. It is based on the experience gained in America when that country was faced with the enormous expansion needed for war production. How successful it proved there can be seen in the increased output per man obtained both during and since the end of hostilities.

It is not possible for a small undertaking to provide all the training facilities required. Some courses need more equipment than can be made available and it is for such courses that the domestic centre is so valuable. If the centre, for instance Wat-

Blue print for To-morrow—

TO-DAY! at Bournemouth, Manchester and Brighton



THE WOODALL-DUCKHAM VERTICAL RETORT AND OVEN CONSTRUCTION CO. (1920) LTD.

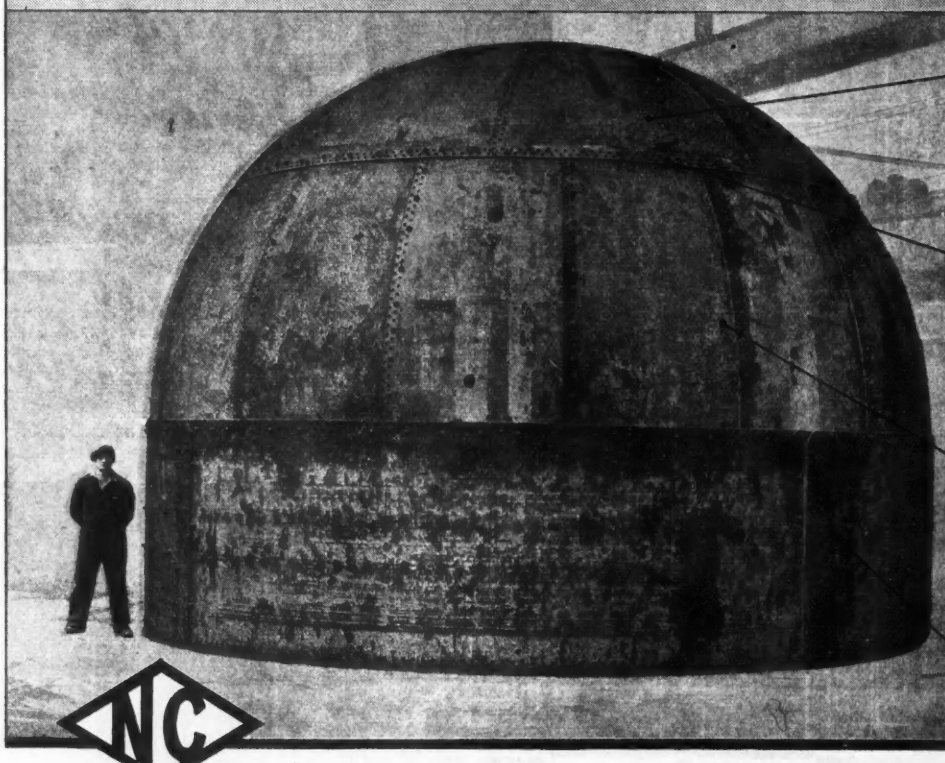
EBURY AND ALLINGTON HOUSES, 136-150 VICTORIA STREET, LONDON, S.W.1

Telephone: VICtoria 7001-7005 Telegrams: Retortical, Sowest, London

Members of the Society of British Gas Industries

W-D

HIGH PRESSURE GASHOLDERS



ACCURATELY PRESSED PLATES

PERFECT ALIGNMENT OF HOLES BY SUB-DRILLING & RE-DRILLING AFTER ASSEMBLY

CORRECT PREPARATION OF CAULKING EDGES

STIFFENING AND BRACING RINGS CAREFULLY LOCATED

WORKMANSHIP BY HIGHLY SKILLED CRAFTSMEN WORKING UNDER EXPERIENCED SUPERVISION

This photograph shows part of a High Pressure gasholder under construction for a large Gas Company, assembled at our Thorncliffe Works prior to inspection by an Insurance Company.

The Gasholder will be 106 feet long and 25 feet 3 inches inside diameter, working pressure 50 lbs. per square inch and the release capacity 163,000 cubic feet.

The main body plates are 15/16" thick and the hemispherical ends are 9/16" thick, whilst the internal framework is of substantial design. The vessel is to be hydraulically tested.

We have adequate, modern, manufacturing and erecting facilities which enable us to carry out work of this type effectively.

Gas Undertakings are invited to send in their enquiries and to consult us on gasholder projects.

NEWTON CHAMBERS

NEWTON CHAMBERS & Co. Ltd., THORNCLIFFE, Nr. SHEFFIELD
LONDON OFFICE: GRAND BUILDINGS, TRAFALGAR SQ., LONDON, W.C.2.

son House, is used as the university to train teachers who can then take elementary courses at their own depots, knowledge can be spread quickly and economically.

At Slough a simple elementary shop has been built. It was designed also for use as an examination centre for gas fitters classification and the four "flats" at the end are used for this purpose. Apprentices are given three months' training, and refresher courses held for all fitting staff. The building was built with works labour in 1946 and cost approximately £500 without appliances.

One fitters' training instructor of service representative status is in charge, assisted by a foreman. These assistants are exchanged after a period and go out to depots as local instructors.

A record of the training required for every man is kept in a form similar to that shown below:—

Name	*Pipework*		*Water Heaters*		
	Iron	*Copper*	*Cookers*	*S.P.*	*M.P.*
F. Brown	1	1	1	1	—
D. White	1	—	1	1	—

Junior office staff are encouraged to attend classes, and a start has been made at Slough in allowing staff under 16 to attend day continuation classes in basic subjects.

Training is never finished. The lack of an incentive and a planned course of training may be the cause of some of the disappointed men found in many staffs, and for the migration of bright personnel out of the industry. Managers and technical personnel in any industry usually keep up to date by attending associations such as our own or meetings of their chartered Institution. Little seems to be provided for the ranks below and yet the popularity of the Junior Associations and the B.G.C. Salesmen's Circles show that there is scope for meetings to be arranged for nearly all the grades of gas employees.

Buying

"Selling" is a much discussed subject, but how rarely do we talk about "buying." In retail shopkeeping careful buying is one of the secrets of success, but in a small gas undertaking it is too often regarded as a social sport.

Large undertakings have undoubtedly improved the quality of goods by insisting on rigid specifications and acceptance tests. Small undertakings, who have no test facilities, tend to become swamped in the copies of specifications which they have little time to study, and are therefore easy prey to glib salesmen. In order to buy peace, too many varieties of the same type of goods are often ordered with consequent confusion in stores and costing departments.

Buying a variety in over cautious penny numbers brings trouble to buyer and seller.

If a set policy or buying list is decided, contrasts can be arranged to cover a definite period such as six months or longer, and much time is saved which might otherwise be wasted in talks with travellers who do not sell goods of the quality or type required.

Thanks to the domestic centre, advice in the form of reports, and specifications can be obtained by the smallest buyer, and it is in the interests of the whole industry that such specifications are used, and samples of goods supplied sent for "spot" test. Unless this is done it is possible for unscrupulous suppliers to sell goods to small companies which may have been rejected by the big ones. Buying then, needs just as much planning as the next subject "selling."

Selling

Discussion of the price of gas is outside the scope of this paper, but sales staff in any undertaking, large or small, must know all the tariffs available and the reasons for variations, so that they can be prepared to offer a standard and sensible explanation.

The work of the Domestic Development Committees towards standardization is doing much good, especially the system used by the London area where one office computes the agreed selling price and issues pages for loose leaf price registers kept by the member undertakings.

It is therefore to be hoped that the imaginary undertaking now under examination can be given such a service by its area committee. Hours of work, calculations and trouble can thus be saved.

Besides using "standard" cash selling prices, a common basis for hire purchase is also required. In London this again has been made very simple by the issue of a table giving round figure hire purchase weekly and quarterly terms which include interest under the different yearly periods against narrow ranges of cash selling price. It is only necessary to look up the sheet for say, a 3-year H.P. period, and find the weekly H.P. instalments and total written opposite the cash selling price. Such a system saves trouble to the small undertaking and to its staff.

Standard prices for fixing to point, or exchange, are most helpful to salesmen and essential for closing a sales transaction quickly. It is necessary to define clearly what is meant by the terms "fixing to point" and to keep a check on price through costing. Here again the London Committee have agreed on a definition and on prices for certain works which provide a helpful basis to smaller undertakings.

While still considering policy it may be worth discussing the use of Dealers. Appliance makers are bound to sell their products to any buyer, but it is embarrassing to the undertaking, striving to ensure that trouble free and safe appliances burn their gas, when bad appliances are sold by ironmongers or builders' merchants. Such merchants solely want profit from their sales. If then, by acting as agents for the undertaking, they can still get money in the form of commission without even having to carry stocks, beyond a showroom display, both merchant and undertaking can be satisfied.

This "Dealers' Scheme" is difficult to apply now, when the dealer wants a guarantee of delivery for his customer. His reaction is to get his own stocks to ensure this.

If centralization of buying is applied in future with delay in adoption or rejection of appliances produced by manufacturers, it seems quite likely that some will intensify their efforts to sell direct to merchants. It is therefore very important that such merchants work with the undertaking for mutual benefit and not in competition.

Industrial enquiries need special treatment. The B.G.C. report estimates one industrial representative per 20,000 consumers, but the real criterion is the number of factories and their size and type. Although technical advice can be supplied through the Industrial Centre organization it seems essential for regular calls to be made and records of gas burning appliances kept up to date. The district representative can and should do this, but if his calls can be made in the company of an expert better results should be obtained. The smallest area will therefore need the services of such an industrial gas expert, even if his visit be for only a day every now and then.

Another form of advisor is also needed to help both sales and service—the Home Service Advisor. The B.G.C. report estimates that 10,000 consumers require one such advisor, but the limiting factor is the standard of Home Service advice which the undertaking thinks is needed.

It seems helpful to make some man or woman responsible for all advertising material. The B.G.C. issues so much excellent material with enticing order cards that it is very easy for a harassed manager to order quantities of material without clearly considering ways and means of distributing it effectively. Golf club tees, whist drive scoring cards, and publications designed for special classes of consumer such as schoolmasters are examples. How much easier it is to channel such material to the advertising man who can then report accurate requirements and so avoid building up cupboards full of obsolete leaflets and books.

Before any type of publicity material is used the first recipients should be the undertakings own staff including the stokers. To their neighbours they are "the gas company."

The types of publicity available are too well known to bear cataloguing, but in a small company as in a large one a plan is needed to use it properly.

The showroom has been defined as the sales room and report centre for customers, to most of whom it represents the home of the "gas company." It has, therefore, got to be a clean, friendly and efficient place.

The most common faults seem to be overcrowding, lack of neat price cards, lack of anything to attract attention of waiting customers, and an unfriendly atmosphere. This does not alone depend on the staff.

It is a pity it is so complicated to introduce the incentive of making the showroom pay its way like any other shop, the difficulty being to cost the service it has to give which is not related to sales, such as receiving the payment of accounts. Some showrooms are trying to make money by selling goods not strictly gas burning such as complete fireplaces, kitchen utensils, &c., on a bigger scale than is normal, but this may not be a wise policy.

To be effective a salesman needs some incentive such as a quota to exceed or a commission or both. In present circumstances such schemes are almost impossible to work and their place must be taken by careful inspection of each man's work to ensure that he does not become slack, stale, or self-satisfied.

Service

The factors needed to give efficient service are trained men, clear orders to guide them, adequate stores, and proper control in the form of inspection of work and costs.

To do good work men need good tools and it is surprising how often the inspection and replacement of tools is overlooked.

Perhaps the most attractive time saver for use particularly on large building estates is a small mobile power workshop with pipe threading machines developed by the Watford undertaking.

Transport is always a problem. In built-up areas close to a service depot, a fitters truck is useful, while for longer distances a fitter can carry little on a bicycle. Obviously motor transport has to be used. It should normally be possible for a stores delivery van to carry both appliances and material to a job at the same time, even if it means appliances being delivered first

to the local stores from, say, a central or group appliance store, but often extra stores are needed on a job which do not warrant the use of a large van. If the district service foreman is equipped with a light 5-cwt. van he can use it not only to make his inspection visits quickly, but also as a feeder for small stores. Obviously the size and type of the district is the limiting factor but such vans have proved invaluable, especially during the period when fully trained fitters are scarce and much of the more difficult practical work falls on the foreman who may need to carry special tools.

As labour time is the most expensive item in the service account, anything to save it is important, whether by equipment or management methods. One undertaking has recently taken out a licence to use a two-way radio for communication.

Many service stores seem to have developed merely as places to keep material without sufficient attention to their function of giving quick delivery.

The storekeeper can make or mar all efforts to cut down unproductive time spent in "works." He is a key man whose training and performance must not be judged solely on his ability to guard his stocks. It is even worth keeping records of the weekly number of hours men spend in the works to see if they can be reduced by new methods, but it is no good to make a saving if men are allowed, through lack of inspection, to waste time on the district.

Nothing has been said so far about maintenance work or emergency service. War conditions forced many undertakings to drop regular maintenance visits to consumer's appliances and in consequence complaint work has increased.

A better way is to use consumer records with date marker tabs and to see that the records are kept up to date.

Maintenance alone seems to justify the use and cost of a selective consumer record system for small areas.

The use of light vans for special maintenance fitters seems attractive but may not be justified in a small area. Moreover it does spoil the ideal of having one man to deal with all the practical work needed by a consumer, whether installation or service.

The provision of emergency service in small districts is often left to a foreman who has a telephone installed at his home and who has to collect fitters for any serious work.

Costing, Charges and Control

Costing for sales and service should provide: (1) Total cost and d. per therm cost of providing service to consumers. (2) Cost price of carrying out chargeable work to which an agreed percentage for overheads and profits can be added. (3) The maintenance of balanced stores and wages accounts.

Allocation of cost is needed under the following headings:— (1) Prime cost, and revenue, in selling appliances for cash. (2) As above, for hire purchase. (3) As above, for chargeable work. These indicate sales turnover, gross profit, and bad debts. (4) Cost of free maintenance under guarantee. (5) Repair and maintenance of Company's appliances on hire. (6) Maintenance of Company's pipes and fittings on Consumers premises. (7) Free maintenance (if any) of consumers pipes and fittings. (8) Cost of disconnecting and refixing meters. (9) Unaccountable labour, such as fitter's time attending stores and office. These show the cost of free work. (10) Salaries, wages, telephones, tools, transport, of Sales and Service Staff. (11) Training. (12) Showroom expenses. (13) Publicity. (14) Commission. (15) Carriage and packing of goods purchased. (16) Bad debts. These show amount of overheads.

These headings are not necessarily complete, and the totals must be compared with previous periods to show tendencies. They can then show if progress and profit is satisfactory, if such items as free work and unaccountable labour are reasonable, and what are the tendencies of overhead expenses. It is very helpful if supervisory staff undertand that such costing is aimed to promote efficiency and is not a type of secret police investigation.

In connexion with stores and wages, three main accounts can be kept. Job time, Appliance stock, General stock, job sheet. All labour is then charged to the job time account by the wages department from their time sheets. All purchases for the department are charged to one or other of the stock accounts by the invoice clerk and the costing clerk credits back wages and material shown on the job sheets to the appropriate account.

If periodically these accounts are balanced they should balance within a close margin which will indicate any leakage or inaccuracy in costing.

Lastly, the recording of results. Comparison of costs alone does not give a full picture of progress in the department. The numbers and types of appliances installed need to be watched and results shown in some diagrammatic manner.

A simple way which is useful when comparing one district with another, is to plot monthly results in terms of per 100 consumers, in addition to charting monthly totals.

(The Discussion on Colonel Wright's paper will be published in next week's "JOURNAL")

NORTH OF ENGLAND ASSOCIATION

ANNUAL MEETING

MEMBERS of the North of England Gas Managers' Association attending their annual meeting in Newcastle on May 7, had an address by Mr. R. D. Keillor, Engineer and Manager, Greenock Corporation Gas Department, on "Gas Industry Administration and Nationalization." There was a large attendance. The President of the Association, Mr. J. G. Aitken, of Carlisle, presided.

The meeting was preceded by a luncheon at the County Hotel. During the course of the ordinary business, it was decided to donate £21 to the Benevolent Fund of the Institution of Gas Engineers. The Herbert Lees Memorial Prize was awarded to Mr. H. Waiton, of Morpeth, Northumberland. Mr. F. Wilson was elected District Representative on the Council of the Institution of Gas Engineers.

The election of officers for the ensuing year resulted as follows:

President, F. L. Scaife, Stockton.

Vice-President, H. Forrest, Spennymoor.

Hon. Secretary and *Treasurer,* A. S. Middleton, Durham.

Members of Committee (three required), J. R. Matthew, Shotley Bridge; J. H. Race, Scarborough; W. O. Kirkwood, Sunderland.

Honorary Auditor, J. R. Gledson, Blyth.

District Education Committee (four required): F. Wilson, Darlington; J. M. A. Mitchell, Newcastle; W. Sutcliffe, Blyth; and Mr. F. L. Scaife, Stockton, who succeeds Mr. R. H. Duxbury, South Bank, who did not seek re-election.

Hovey Education Trust Advisory Committee: J. W. Pallister.

Administration and Nationalization

The address by Mr. Keillor was published in the "JOURNAL" last week.

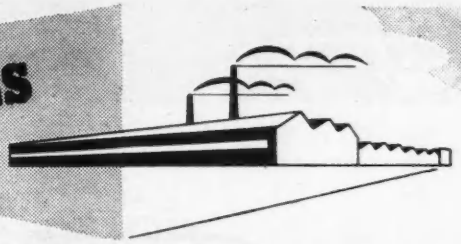
In congratulating the author on a lucid and comprehensive address on a subject fraught with many problems, Mr. **E. Crowther** (General Manager of the Newcastle and Gateshead Gas Company) said that Mr. Keillor had expressed the opinion that "one can, with some assurance, and authority, forecast to what extent" the existing administrative organizations of the gas industry will require adjustment to suit nationalized control. While this was a very courageous claim, to which not all of them would be prepared wholly to subscribe, some speculation and discussion upon the subject might well be valuable in clarifying some of the many difficult problems inseparable from so sweeping a change as was impending, so that the gas industry might perhaps be somewhat better prepared for the change than its predecessors on the road.

The experiences of the electricity industry in particular, if made available to and closely studied by the Gas Council and Area Boards, should be of great advantage in signposting the most direct route to the goal of an efficient and coherent system of control. Even with the greatest forethought, an immense volume of work would have to be done before that goal was reached, and if he were to be tempted to follow Mr. Keillor into the dangerous realms of prophesy, he would hazard the opinion that the work of what one might call the "first generation" of Council and Boards would be no more than to construct the foundations upon which their successors would build. As any engineer knew, there was little of a spectacular nature to be seen in foundations when the first excavations have been filled with concrete, but upon their soundness the stability of the whole subsequent structure must depend.

Mr. Keillor had begun by considering the local aspects of transfer, and it was fortunate that a great deal of experience of this nature had been built up through the activities of holding companies, and of undertakings which had pursued a policy of amalgamation. In the areas in which Company controlled undertakings at present predominated, it seems probable that administrative grouping would proceed more rapidly and easily than in areas largely municipally controlled, as administrative machinery in the former could be taken over in its entirety.

In either case, however, the unification of systems of accountancy, billing, costing, and the like, and, even more, the redeployment of available staffs to the best advantage, would require great care if the desired results were to be obtained.

BEHIND THE SCENES



IN THE MANUFACTURE OF MODERN GAS APPLIANCES

Applying Liquid Enamel

One of the most interesting processes in the manufacture of gas appliances is the covering of metal surfaces with vitreous enamel. • After the various parts have been thoroughly cleaned by sand-blasting or acid treatment, they are ready for their first coat of enamel. Usually the first coat is applied by dipping, and is known as the "grip-coat"; for it acts as a bond between the metal and subsequent coats of enamel. Application of the final coat is done by means of spray-guns in specially illuminated spray-booths as here illustrated. Spraying enamel on the metal parts calls for considerable skill. In order to ensure a perfect surface, the parts must be covered evenly and to a prescribed thickness —this requires nice judgment in handling the spray-gun. • Slow and careful drying is the next operation after the parts have received their final coat, and this is done in a thermostatically controlled drying oven. Drying takes about 30 minutes at a temperature of 150° F.

R. & A. MAIN LIMITED • LONDON & FALKIRK

NEW WORLD Radiation Ltd REGULO

Only Radiation Gas Appliances Have REGULO CONTROL

Radiation Ltd. RADIATION HOUSE · ASTON · BIRMINGHAM, 6

NEW WORLD Radiation Ltd REGULO

NEW WORLD Radiation Ltd REGULO

Only Radiation Gas Appliances Have REGULO CONTROL

Showrooms and London Offices: 7 *and* 8 STRATFORD PLACE, W.1

NEW WORLD Radiation Ltd REGULO

METERS

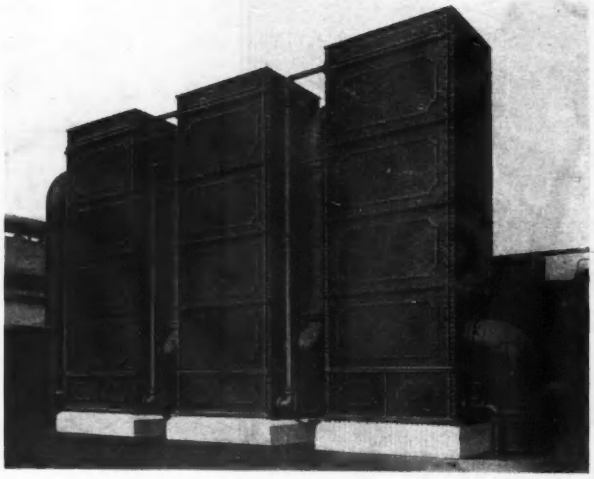
BRASSWORK

SAWER & PURVES (BRANCH OF METERS LTD.)

NELSON METER WORKS
MANCHESTER, 10

Branches at
NOTTINGHAM - WATFORD - BRISTOL

TELEPHONE COLlyhurst 2289
TELEGRAMS SAWER, MANCHESTER



CONDENSERS

Steel or Cast Iron Heat Exchangers for all types of Chemical Plant. Horizontal or Vertical Tubes.

WORKS:

C. & W. WALKER LTD.
Donnington, Nr. Wellington, Shrops.

Telephone: WELLINGTON-SHROPSHIRE 12.
Telegrams: "FORTRESS," DONNINGTON, SHROPSHIRE.

LONDON OFFICE:
70, VICTORIA STREET, S.W. 1.
'Phone: Victoria 5842.
'Grams: "Fortress," Sowest, London.

Turning to changes at sub-Area levels, one could not fail to be impressed (even in the face of one's personal experience of these matters) by the extent of the claims of the various existing national bodies on the time of so many of them. This was inevitable under the present set up—the work of these bodies was necessary, and they were not established for fun—but under Area Board direction, where the consent of each of 1,000 undertakings to accept majority decisions would no longer be required, there should be room for much economy of effort in such work.

On the other hand, Area Boards might well consider it wise to establish committees each presided over by one of their members and attended by the more senior executives in the Area to discuss many of the subjects embraced in Mr. Keillor's list, and to advise their Boards upon them.

It might be anticipated, too, that Area Boards would desire to give all grades of workers under their control an opportunity to make their contribution towards efficient operation. Provided that such opportunity was accepted with a proper sense of responsibility and understanding on both sides it should be productive of much good, and the somewhat disappointing results hitherto exhibited by works councils bettered. The attitude of mind to be cultivated was a search for more interesting and less arduous work through greater efficiency and better methods, not merely through shorter hours or more men to the same job. At the national level, the exact relationships and division of work between Council and the Area Boards would have to be determined—perhaps to some extent by trial and error—before the apportionment of the duties now performed by many of the national bodies could be worked out, although it was evident that the bulk of this work must continue to be done either on a centralized or on an Area basis.

In the fields of education and research, the industry was fortunate in the existence of established machinery of proved value, which the Institution of Gas Engineers and the Gas Research Board would place at the disposal of the Minister, the Council, and the Area Boards, thereby enabling them to devote their full attention to other matters.

I feel that the District Associations might find it of advantage to become branches of the Institution, as among other things they would then be able to co-ordinate matters of training and education more closely than at present.

Finally, I would mention one topic (and I approach it with some hesitation) which Mr. Keillor has avoided—the technical Press.

The industry will continue to need its technical literature in the future at least as much as in the past, but I have heard no expression of opinion as to whether or not it can continue to be furnished on a commercial basis under the new conditions.

It may be that the Institution will have to take a part in considering this question—one could visualize a publication combining the functions of an official organ of the Institution and its District Branches, of a journal of general interest to the industry both at home and abroad, of an advertising medium for contractors, and possibly as an official gazette of the Council and Area Boards. The subject should, I suggest, receive the most careful consideration by all those interested at the earliest opportune time: it is as much a problem of administration as those to which Mr. Keillor's timely paper has directed our attention.

The Question of Initiative

Mr. W. A. Pask (Darlington) suggested that under nationalization opportunities for men in the lower grades of the gas industry to display initiative would be destroyed. Under existing ownership, men in certain of the lower grades were called upon to make decisions and accept responsibilities. It was on the manner in which these tasks and responsibilities were handled that it became possible to distinguish the potentially good gas engineer from one who might be not so good. Under nationalization, with probably large scale direction from higher circles, it would seem there would be nothing to take the place of this method of selecting men worthy of advancement and higher position. Under nationalization, municipal authorities would lose their gas committees and holding companies would lose their boards of directors. Whatever the future, however, it was incumbent upon them to make a good show of the tasks before them.

Mr. A. G. I. Anderson (Bognor Regis, and formerly of Shotley Bridge) anticipated the appointment of a multitude of officials to the industry after nationalization, some of whom would obviously be starting from scratch, which would mean that to get information they would have to issue forms and no doubt they would require staffs to deal with those forms. Holding companies, under existing ownership, were not burdened by such a tremendous superstructure. He suggested that existing schemes of nationalization were suffering from severe growing pains because they were trying to grow from the top downwards instead of being built up on a sound foundation.

Mr. J. G. Aitken (the retiring President), in adding his congratulations to Mr. Keillor, said he was convinced that the people who had put the gas industry where it was were those who were responsible for its management and its technical efficiency. They were not ruled by gas committees or by directors so much as it was their duty to lead and advise committees and directors. He thought that the gas industry had little to fear from any sort of area boards or councils which might be set up.

COVENTRY HIPPODROME HEATED BY GAS

The number of theatres now being converted to gas for heating purposes is considerable, and the story of a newcomer to the ranks has come from the Coventry Gas Department. The Coventry Hippodrome, which seats 2,000 people, was previously heated by three 13-section Hartley & Sugden "White Rose" coke-fired solid fuel boilers, but was scheduled for conversion, with fuel oil receiving prior consideration. The Industrial Department of the Coventry Gas Undertaking successfully convinced the consumer of the advantages of a simple and fully automatic burner unit employing "neat" flames, and the estimate was accepted. As it was estimated that the maximum gas rate for each boiler would be 3,000 cu.ft. per hour, it was necessary to run in a new 6 in. diameter service, and two 6,000 cu.ft. per hour capacity meters were installed.

The modifications to the boilers were such that they could, if necessary, revert to coke-firing in two or three hours. The firing door and the ash pit door were removed and the firebars were paved with 1½ in. thick Stourbridge refractory firebricks. The ash pit door aperture was bricked up with hot face semi-insulation firebrick, and in the fire-door opening was built a 9 in. hot face wall containing a horizontal rectangular slot, 16 in. long, 4 in. wide, diverging into the boiler to give a dispersion angle of approximately 10°. Replacing the fire-door was a specially cut ¼ in. steel plate, into which was cut a slot coincident with the aperture in the firebrick, when the plate was bolted to the boiler front casing.

The method of firing was quite simple, "neat" gas flames being projected into the opening described above, from 30 $\frac{7}{32}$ in. diameter holes drilled in an accurate horizontal line at ½ in. centres, in a short length of 3 in. diameter gas pipe located co-axially with the slot. The dimensions of the latter had been calculated to permit the entry of the gas stream, together with all the air required for complete combustion under the prevailing pressure and draught conditions.

The gas supply to each burner was governed at 25/10 in. W.G. and automatic damper control was effected by means of an immersion type, adjustable head, indirect acting thermostat operating a 4 in. diaphragm type remote control valve with an adjustable by-pass setting screw. A flame failure device was fitted consisting of a bi-metal strip actuating a diaphragm relay gas valve of the complete shut-off type.

The results have been completely satisfactory and although the present season has not been a severe one, it has only been necessary to employ two boilers and to average a gas rate of 3,000 cu.ft. per hour, with a maximum full on rate of 4,700 cu.ft. per hour.

GAS BILL (*Continued from p.* 323)

would discuss with employees incentive schemes such as co-partnership and profit sharing, and welfare amenities.

Mr. Gaitskell maintained that such matters should be left to the Gas Council and the Area Boards to decide for themselves. They did not propose to put upon them any specific obligations of this kind which they must carry out. They were asking that existing schemes should go on until new arrangements which might be thought satisfactory could be negotiated. That would leave the matter open to the Gas Council, the Area Boards, and the trade unions to make whatever arrangement they wanted.

The amendment was defeated.

A lengthy amendment to ensure the continuation of welfare amenities and other non-financial provisions of co-partnership schemes was moved by Colonel Clarke, who said how greatly appreciated were such things as convalescent homes, pension schemes, and burial and other benefits. He moved the amendment in the hope that some provision would be put into the Bill regarding the future intention in the industry to continue these great benefits which had made such a difference to the whole spirit of the enterprises in the past.

Mr. Robens, Parliamentary Secretary, described the amendment as unnecessary. He was perfectly satisfied that there would be first-class machinery for the continuance of what was now best in the industry, and for the continuance of the good relations that had existed in the past. He gave an assurance that existing machinery would continue after vesting day until it was changed by agreement on both sides.

Mr. Boyd-Carpenter however, pointed out that under the Bill negotiation meant negotiation between the Gas Council and its "nominated partner," and Mr. Pitman held that the Parliamentary Secretary was seeking "unprincipled freedom" for the Gas Council. Mr. Gaitskell retorted that it must be free to negotiate with whom it thought fit. It would be quite wrong for Parliament to dictate in the matter.

On a division the amendment was defeated by 15 to 7.

GAS UNDERTAKINGS' RESULTS

Auckland Gas Company (New Zealand.)—Profit for the year 1947, including Government subsidy of £26,364, after deducting working expenses, rates, and land tax, depreciation, and other charges, amounted to £51,209. Payment of dividend at the rate of 2½% for the year leaves a balance of £2,134, to which is added a transfer of £11,744 from investment fluctuation account, now closed, making £13,878, compared with £2,547 brought in.

Leamington Priors Gas Company.—A balance of £11,507 is transferred from revenue account to profit and loss account in respect of 1947, compared with £14,198 for the previous year. Statutory maximum dividends of 10% on the "A" Ordinary shares and 7% on the "B" and "C" Ordinary shares, less tax, have been declared, leaving £13,893 to be carried forward, against £11,885 brought in from 1946. Gas sold during the year totalled over 3,200,000 therms, representing an increase of over 3% compared with sales in the previous year. Presiding at the annual meeting, Dr. Harold Mason said the Directors did not support the principle of nationalization if only because their service to the public was founded essentially on the intimate knowledge of local conditions. It was a service promoted and designed to meet individual needs, and changing needs, and they were convinced that as a local unit, working in a spirit of public interest and free to take decisions as cicumstances dictated, they should be able to provide a fuel service more efficient, more flexible and more acceptable to the public than a service designed and functioned by more remote control. However, the Government was determined to complete the nationalization of the fuel industries by including gas and they were obliged to accept the situation. As to compensation for shareholders, the basis followed generally the precedent adopted for the railways and the electricity supply industry, and while it aimed at the equalization of capital values it completely ignored the effect on incomes. Gas securities were to be exchanged for a new stock, British Gas Stock. Where gas securities had had an official Stock Exchange quotation the basis of exchange was to be determined by the quotation on certain dates either in 1945 or 1947. Where securities had not been quoted, as in the case of the Leamington shares and the Debenture stock, the value would be determined by agreement between the Ministry of Fuel and Power and a shareholders' representative, but it was clear that regard must be had to corresponding securities in the quoted class. Dr. Mason concluded on a personal note. He was appointed a Director in 1901, became its Vice-Chairman in 1914 and Chairman in 1924. He did not enjoy the prospect of his connexion with the Company coming to an end. Nevertheless he expressed his gratitude that for a period of nearly 50 years he had merited the shareholders' confidence and been associated so intimately with the growth of the Company's undertakings and its sound establishment as an integral part of Leamington.

Maidstone Gas Company.—Gross profit on revenue account for 1947 amounted to £15,846, compared with £9,527 for the previous year. After meeting interest on Debenture stock and loans, and writing £5,903 off the renewals suspense account, there was a net profit of £5,465, making with the balance brought forward a total of £16,224. A final dividend making a total of 8% for the year has been declared, leaving a balance of £8,932 to be carried forward. In his statement issued with the report and accounts, Mr. A. E. Sylvester, Chairman, said that during the first four months of 1947 the output of gas exceeded that in the same period of 1946 by 17%, and a record daily output was achieved on Jan. 29, 1947, when nearly three million cu.ft. of gas left the works. Reconstruction of the first half of the retort house was completed at the end of 1946 and the new plant was in operation for the whole of 1947. The yield of gas per ton of coal carbonized for the year showed a considerable advance over that of the previous year.

Montevideo Gas and Dry Dock Company.—The audited accounts show a loss for 1947, after adjusting for exchange profit and tax adjustments, of £8,219. For 1946 there was a net profit of £38,258, after providing for taxation. A dividend of 2%, against 4% for the previous year, and a transfer of £16,257 to reserve, leave a balance of £28,309 to be carried forward.

COMPANY NEWS

Parkinson and Cowan, Ltd.—The annual meeting was held in London on May 6. The Chairman, Sir George Jessel, in his statement which had been circulated with the report and accounts, estimated that the gross profits would have been at least £60,000 higher but for the fuel crisis early in 1947. Production during the year was limited in the main by raw material supplies, although these, with the exception of steel, had eased recently. The shortage of labour in Birmingham remained acute. The Company achieved foreign sales of nearly three times the value of the preceding year. Executives visited foreign markets and a number of agreements designed to extend overseas interests were concluded, the most important being with Mitchell Cotts & Co., Ltd., for the establishment of Parkinson and Cowan (South Africa), Ltd., as a jointly owned enterprise. Speaking generally, the sellers' market in light engineering products was ending and there were three factors which combined to make the outstanding order book lighter. The first was the reduction in the building programme, to which the activities of the meter and stove interests were directly geared. The second was that the nationalization of the electricity supply industry and the impending nationalization of the gas industry was causing an understandable element of hesitation in placing orders, although this was only a transient phase. The third, and more serious, was that export markets all over the world were tightening up. The civil disorganization in India and Pakistan, the import restrictions imposed by many overseas Governments, and the increasing strength of international competition were all much apparent. The substantial improvements effected in technical and managerial methods, which the improved profits already indicated, placed the Company in a position to compete effectively in all the fields in which it operated. Sir George concluded: "We are exerting the utmost effort to ensure that the products we make, the manner in which we make them, and the commercial reputation of the Company, can increasingly become a source of pride, satisfaction and profit to shareholders, staff and workpeople alike."

Model Gas-Works

The York, Harrogate and District Group of Gas Companies is indebted to the Manchester Gas Department for the loan of their

model of a gas-works plant which was recently displayed in the showroom windows of the Harrogate Gas Company in connexion with a Model Engineering Exhibition recently held in that town. The display created tremendous interest and the photograph shows several of the models which were later seen in action in the Exhibition Room.

GAS STOCKS AND SHARES

The serious news from Palestine has overshadowed the stock markets for the past week, and the imminent British departure only increased the general atmosphere of caution. Business has been very small and the markets reasonably firm. Much of the influence experienced has emanated from the Argentine as a result of the release of the debenture moneys. Following the allocation terms. Uruguayan railway stocks have shown considerable adjustments. The statement made by Sir Stafford Cripps that control of the sterling area would not be handed over to the U.S. had a stabilizing effect and, towards the end of the week, British funds returned to favour, especially 4% stocks and nationalization issues, correcting their tendency to sag on Wednesday. The Government Securities index rose to 112.23 on Thursday, higher than for some time and the *Financial Times* Industrial Index also showed a steady rise to 120.8.

In the gas stock market, the volume of business recorded was considerably less than of late, the number of transactions being 395, compared with 531 for the previous week and 236 for the corresponding week six months ago. The most spectacular increase of 1s. was shown by Associated Gas and Water Undertakings ordinary shares, while Colombo, Ltd., ordinary shares made a further drop of 2s. 6d.

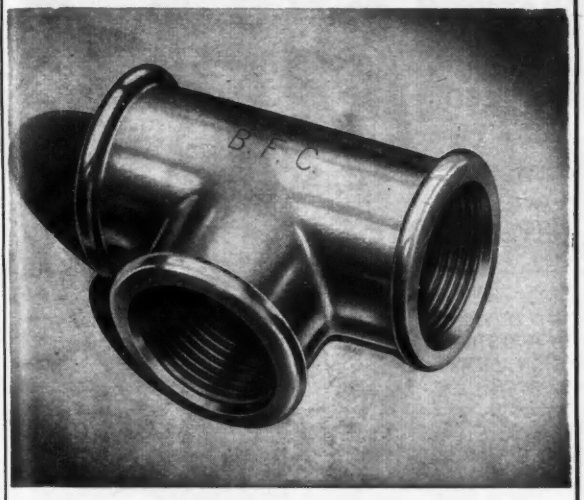
The week's rises and falls were as follows:

OFFICIAL LIST

Associated G. & W. U'd'tgs, ord.	22/ — 24/	+	1s.
Colombo Ltd., ord.	27/6 — 32/6	—	2/6
Croydon, 4 p.c. irred. pref.	94 — 99	+	1
Gas Light & Coke, ord.	22/6 — 23/6	—	3d.
Liverpoool, 5 p.c. ord.	120 —125	+	1
South Metropolitan, ord.	97 —100	—	½

Best of Fittings

Malleable Iron Fittings. Tested White Heart.



BRITISH FITTINGS CO. (HENDON) LTD.
ADRIAN AVENUE, NORTH CIRCULAR ROAD, N.W.2
London Stock Telephone: GLA. 6363
Manchester Stock

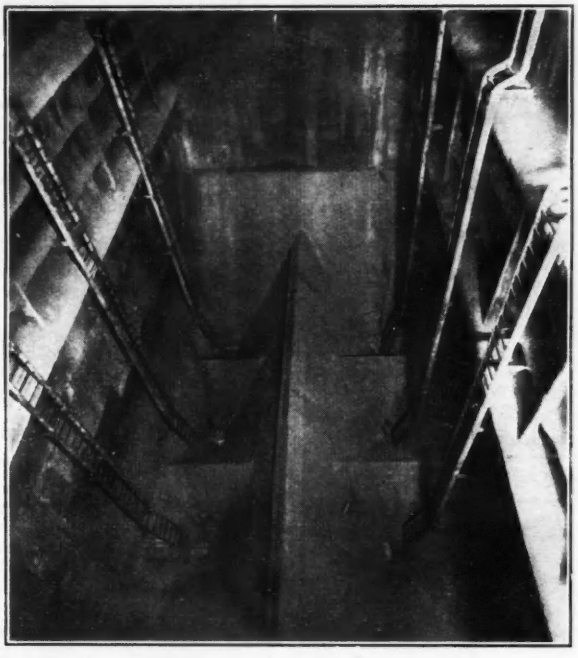
E. E.
JEAVONS & CO. LTD.
TIPTON

Contractors for
GAS DISTRIBUTION
'Phone : TIPTON 2161 'Grams "PIPELINES," TIPTON

CASES FOR BINDING
Quarterly Volumes of the "Gas Journal."
3s. 6d. each, post free.
Walter King, Ltd., 11, Bolt Court, Fleet Street, London, E.C.4

COMPRESSORS & EXHAUSTERS FOR AIR AND GAS.
See our Advertisement Next Week.
REAVELL & CO. LTD. IPSWICH.

Gunite is PROTECTION against abrasion



Gunite—concrete applied by air pressure—has numerous applications where its great density and extreme adhesion have particular value.

For lining coal bunkers and steel chimneys it is an ideal material, possessing great resistance to corrosion and protecting steel-work from the abrasive action of the raw coal.

For repairing reinforced concrete it has particular merit, as, due to the method of application, a uniform density and adherence is obtained in whatever place the Gunite is applied, thus overcoming the common fault with hand-placed methods.

CONCRETE PROOFING CO. LTD.
100 · VICTORIA ST · S·W·1

'Phone: Victoria 7877 & 6275

"ABBIRKO" FORCE PUMPS

For Clearing Gas Service Pipes

No. 77 MODEL

PUMPS OF QUALITY:

EFFICIENCY

GUARANTEED

. . . . . .

WE MAKE TWO MODELS VIZ.,

NO. 77 : *FITTED WITH FULLWAY COCK, SINGLE STAGE PUMP, DESIGNED FOR GENERAL UTILITY WORK.*

. . . . . .

NO. 35 B : *IMPROVED HIGH PRESSURE FORCE PUMP FITTED WITH TWO STAGE PUMP, INSTANTANEOUS PISTON RELEASE COCK, 300 lbs. PRESSURE GAUGE.*

MULTIPLE SCREWED ADAPTOR CAN BE SUPPLIED WITH EITHER PATTERN.

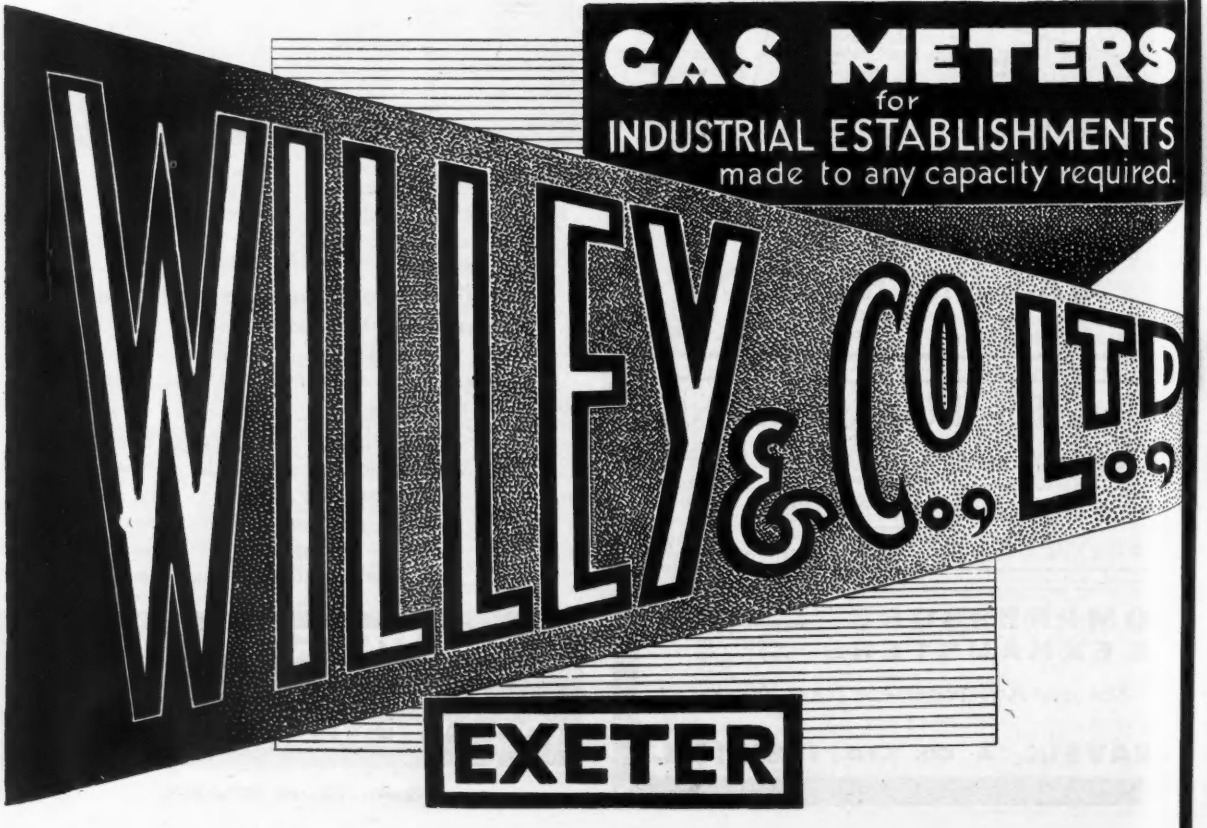
TRADE ABBIRKO MARK

No. 35B MODEL

Write for particulars to Sole Makers :

ABBOTT, BIRKS & CO. LTD.

'Phone : Waterloo 4066 (4 lines). 90-91 Blackfriars Road, LONDON, S.E.1. 'Grams : "Abbirko, Sedist, London."



STRINGER BROTHERS

ALBION WEST BROMWICH

S.B

IRON & STEEL PLATES & SHEETS BARS & SECTIONS

Telephone: WEST BROMWICH 0436-7

GASHOLDERS PURIFIERS WASHERS CONDENSERS GAS VALVES CASTINGS WELDED PIPES STEELWORK

WESTWOOD & WRIGHTS, LTD.

BRIERLEY HILL, STAFFS.

Copies now available . . . . Invaluable to Students

GAS DISTRIBUTION ENGINEERING

The Principles for Students

by R. N. LE FEVRE, *M.Inst.Gas E., A.M.I.Mech.E.*

This book is an introduction to the subject of gas distribution practice, and, as such, deals with the general principles involved in conveying town gas from the gas works where it is made to the point of entry to the premises where it is consumed. It makes no pretence to be a complete treatise on the subject. It is a book primarily for students and has as its main objective the presentation of the essential facts in a simple manner.

Extract from the review appearing in "GAS JOURNAL," April 21, 1948

". . . In his preface the author says that his main objective has been to present the essential facts in a simple manner and in the first volume to cover the examination requirements of the Institution of Gas Engineers up to Ordinary Grade standards.

Mr. Le Fevre has undoubtedly achieved the main objects of his task. The book presents in simple but comprehensive form a complete introduction to the study of gas distributing practice, and while in the main it may be considered as a student's text book, it will undoubtedly find its place in most distributing engineers' libraries.

The range of the book is most comprehensive. . . . . The book is liberally illustrated with photographs of plant and equipment and, more particularly, line and detailed sketches which should prove invaluable to the student studying for the examinations of the Institution of Gas Engineers (Supply) Course. It will undoubtedly prove a great boon to both lecturer and student and fill a gap which exists in the present limited range of text books available in the gas industry."

Demy 8vo. Over 300 pages with 265 illustrations. Price **22/6d.** post free

WALTER KING, LTD., 11, Bolt Court, Fleet Street, London, E.C.4.

3

The 'A&M' METER

ALDER & MACKAY LTD. · GAS METER MANUFACTURERS · EDINBURGH · LONDON · BRADFORD

UNDERPRESSURE ENGINEERING CO., LTD.

UNDERPRESSURE CONNECTIONS
SPLIT COLLARS
SOCKET CLIPS

UNION FOUNDRY, MANSFIELD, NOTTS.
NORFOLK HOUSE, NORFOLK STREET, STRAND, W.C.2

Service Enquiries: TEMPLE BAR 2943. *London Storehouse:*
VALE ROYAL, KING'S CROSS, N.7.
Everything for Gas and Waterworks Maintenance

CENTRAL ACTION DRILL STANDS
SERVICE CLEANSERS
TOOLS, ETC.

PUBLISHERS' NOTICE.

GAS JOURNAL. (Weekly.)

Subscription Rates: Home and Empire :- **45/-** per annum; Foreign :- **52/-** per annum. (Both payable in advance.) A copy of the "Gas Journal" Calendar & Directory is presented each year to continuous subscribers.

Classified Advertisements: All small classified advertisements are charged at **1/-** per line (approx. 8 words) – minimum charge **5/-**. A Box Number address occupies 2 lines, and a further **6d.** is charged towards cost of postage on replies.

GAS SERVICE. (Monthly.)

Annual subscription Rate :- **6/-** (payable in advance). Classified Advertisement charges as for "Gas Journal."

GAS.

The Record of the British Junior Gas Associations. (Monthly.)

Annual Subscription :- **12/-** (payable in advance). Classified Advertisements not accepted.

WALTER KING, LTD., 11, BOLT COURT, FLEET STREET, LONDON, E.C.4.
Telephone : CENtral 2236-7. **Telegrams : Gasking, Fleet, London.**

REPAIRS

PAYNE & FLOOD, LTD., 182, Oldham Road, Manchester, 4, Phone Col. 1393, are in a position to undertake all types CARBONIZING PLANT REPAIRS, Retort House Reconstruction, Producer Relinings, Hot and Cold Patching, Structural Steelwork Erected and Dismantled. Expert advice available.

PATENTS

KINGS PATENT AGENCY, LTD.
(Director, B. T. King, A.I.M.E., Patent Agent)
Advice, Handbook, and Consultations free. 146a, Queen Victoria Street, London, E.C.4. Phone : City 6161.

MEWBURN, ELLIS & CO.,
CHARTERED PATENT AGENTS
AND TRADE MARK AGENTS
70 & 72, Chancery Lane, London, W.C.2.
Telegrams : "Patent, London." Phone : Holborn 0437
And 3, St. Nicholas Buildings, Newcastle-on-Tyne.

OXIDE

BEST QUALITY DUTCH BOG ORE SPECIALLY ACTIVATED OXIDE OF IRON

which has stood the test of 70 years and rapidly absorbs 60% Sulphur (wet basis).

Send your enquiries to

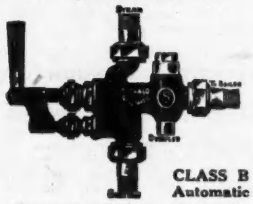
GAS PURIFICATION & CHEMICAL COMPANY LIMITED

ESTABLISHED 1873

PALMERSTON HOUSE, 34, OLD BROAD STREET, LONDON, E.C. 2.

Telegrams: "Purification, Stock, London." Telephone: London Wall 5077

BUFFALO INJECTOR
(British Made)



CLASS B Automatic

Operated entirely by one handle

GREEN & BOULDING, LTD.
162a, DALSTON LANE, LONDON, E.8

PLANT, &c.

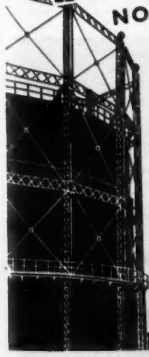
ROBERT DEMPSTER & SONS, LTD., ELLAND, Builders of CARBONIZING PLANTS, both Horizontal and Vertical. Manufacturers of CONDENSERS, PURIFIERS GASHOLDERS, &c., also every description of COAL and COKE HANDLING PLANT. *Telegrams:* "Dempster, Elland." *Telephone:* Elland 2241, 2242 and 2243.

LEEDS X·L PLASTIC FIRE CEMENT

Let us send you details of the Leeds X.L. range of Refractory Cements

LEEDS X.L. FIRE CEMENT CO., HYDE PARK LEEDS

HUMIDINE
NON-SETTING PAINT



Used by the leading Gas Companies for the protection of lower plates and cuppings of Gasholders. The most efficient anti-corrosion paint in existence. HUMIDINE never cracks, never dries and is absolutely impervious to water. OXYGRAFITE GASWORKS PAINT is also manufactured by ...

ASPINALLS
(PAINTS) LIMITED
CARLETON · SKIPTON · YORKS
TELEPHONES: SKIPTON 548/9

nevin d. hirst

"KLEENOFF"

THE COOKER CLEANER

Tins for Sale to Consumers. In Bulk for Works Use

OXIDE OF IRON.

BALE & CHURCH, LTD.
33, ST. MARY AT HILL, LONDON, E.C.3.

Telephone: Mansion House 1156. Telegrams: "Balefire, London."

BOG ORES

IRISH
BELGIAN and DUTCH

HARRISONS (LONDON) LTD.
66, MARK LANE, LONDON, E.C. 3

Telegrams: "BIRCHROOK, LONDON." Telephone ROYal 3120.

PLANT FOR SALE & WANTED

PHONE 98 STAINES.

AIR RECEIVER, 18 ft. 6 in. by 4 ft., 100 lb. Broom & Wade TWIN COMPRESSOR, Type D21.

Cylindrical ENCLOSED TANK, 30 ft. by 7 ft.

34 KW. STEAM GENERATING SET, 220 volts D.C.

Robey H.S. VERTICAL STEAM ENGINE, 9 in. by 7 in.

LANCASHIRE BOILER, 24 ft. by 8 ft., 120 lb.

Weir type VERTICAL FEED PUMP, 2,000 g.p.h.

HARRY H. GARDAM & Co., LTD., Staines.

WANTED. Secondhand TAR PUMP, steam driven with 2 in. or 3 in. suction and delivery connections. Vertical Pearn or Cameron type preferred and must be in good order.

Quote price and particulars and where available for inspection to MANAGER, Gas-works, Prestonpans.

JERSEY, CHANNEL ISLANDS

THE Jersey Gas Light Co., Ltd., invites offers for the purchase and removal within six months from date of purchase of the following:

Three Yorkshire type BOILERS, pressure 120 lb. per sq. in. Size 7 ft. 6 in. by 22 ft., evaporative capacity 400 gall. per hour (each boiler) using coke and breeze.

The above complete with superheaters and with existing fittings: Two steam turbines, fans and ducting.

Insurance Test Certificates held.

The Company does not bind itself to accept the highest or any offer.

STUART PH. PEPIN,
Engineer and Manager.

97, Bath Street, Jersey.
April 23, 1948.

TANKS FOR SALE.

CLOSED CYLINDRICAL.
One off 30 ft. by 8 ft. Five off 28 ft. by 7 ft. 6 in. Six off 18 ft. by 9 ft. One off 37 ft. by 5 ft. One off 24 ft. by 6 ft. One off 10 ft. by 5 ft. 7 in.
OPEN CYLINDRICAL.
One off 10 ft. by 8 ft.
CLOSED RECTANGULAR.
One off 25 ft. by 9 ft. 6 in. by 5 ft. Five off 14 ft. 6 in. by 7 ft. by 9 ft. One off 6 ft. by 6 ft. by 2 ft. 6 in. One off 4 ft. by 4 ft. by 4 ft. One off 6 ft. by 3 ft. 9 in. by 2 ft. 6 in. One off 6 ft. by 3 ft. by 3 ft. One off 5 ft. 6 in. by 3 ft. by 3 ft. One off 6 ft. 6 in. by 2 ft. by 2 ft. Two off 5 ft. 6 in. by 2 ft. by 2 ft. One off 2 ft. 6 in. by 2 ft. by 2 ft.
OPEN RECTANGULAR.
Six off 5 ft. by 5 ft. by 7 ft. One off 9 ft. by 3 ft. 6 in. by 4 ft. One off 7 ft. 9 in. by 4 ft. by 4 ft. Twenty off 6 ft. 6 in. by 4 ft. 2 in. by 4 ft. 7 in. One off 10 ft. by 3 ft. by 3 ft.

JAMES N. CONNELL, Phoenix and Clifton Works, Coatbridge, Scotland. Phone Coatbridge 1121 (5 lines).

FOR SALE. Considerable quantities of clean new FIRE BRICKS. Delivery to any part o England. Enquiries invited. Apply A. KING & SONS 110, Ber Street, Norwich.

CLEVEDON AND YATTON GAS COMPANY

SURPLUS PLANT FOR IMMEDIATE DISPOSAL.

GAS EXHAUSTER, by George Waller & Co. (20,000 cu.ft. per hour), direct coupled to steam engine and complete with 8 in. screw down valves, &c.

TOWER SCRUBBER (cylindrical) made of bolted cast iron sections with 8 in. inlet and outlet but no connections or valves. Capacity 250,000 cu.ft. per day.

GAS EXHAUSTER, in duplicate, by George Waller & Co. (each 10,000 cu.ft. per hour), direct coupled to steam engines, complete with all connections, by-pass, steam compensators, &c.

ROTARY WASHER SCRUBBER, by W. C. Holmes & Co., complete with 10 in. connections and three 10 in. valves but without attached steam engine. Capacity 250,000 cu.ft. per day.

GAS CONDENSER. Water cooled vertical cylindrical with ancillary water circulation, complete with 10 in. connection and three 10 in. valves. Capacity 250,000 cu.ft. per day.

VAPORISOR. Gas-heated petroleum vaporisor. by W. Parkinson & Co., complete with 20 gall. tank, taps and regulating valve.

The above plant is in good condition and, with the exception of the first item, is in position as last used.

For further particulars or to view apply to the ENGINEER AND MANAGING DIRECTOR, 16, The Triangle, Clevedon, Somerset.

APPOINTMENTS WANTED AND VACANT

None of the vacancies in these columns relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he or she is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

ASSISTANT WORKS MANAGER required by old established leading firm of Gas and Chemical Plant Manufacturers. Applicants must be between 25/35 years of age. Workshop trained in medium or heavy engineering, having specialised in structural and circular mild steel fabrication. Conversant with modern production methods. Applicants should state age, particulars of experience, position now held and salary expected. Reply to No. 9730 "GAS JOURNAL," 11, Bolt Court, Fleet Street, London, E.C.4.

MESSRS. NEWTON CHAMBERS & CO., LTD., Thorncliffe, near Sheffield, invite applications for appointment as TECHNICAL ASSISTANT in their Chemical Engineering and Gas-works Plant Department. The appointment will involve travelling to various parts of the country. Previous industrial experience and chemical plant operation will be an important advantage. Preference will be given to a young man with a science degree or equivalent qualification, age 22 to 30. Apply in writing to the PERSONNEL OFFICER.

LEAMINGTON PRIORS GAS COMPANY

TECHNICAL ASSISTANT.

APPLICATIONS are invited for the above position at an inclusive salary of £390 per annum.

Candidates should have practical and theoretical knowledge of gas-works routine, particularly operation of continuous vertical retort installations and should be competent draughtsmen.

No house is available at present but the appointed candidate would receive priority in the event of one of the Company's houses becoming vacant.

Applications, with *copies* of not more than three recent Testimonials, to be delivered by May 21, 1948, to:—

R. S. RAMSDEN,
Director, General Manager and Engineer.

Gas-works,
Leamington Spa.

COUNTY BOROUGH OF OLDHAM

(GAS DEPARTMENT.)

APPLICATIONS are invited for the following appointments:

One SENIOR DRAUGHTSMAN, salary A.P.T. Division, Grade IV, £480 to £525 per annum.

One JUNIOR DRAUGHTSMAN, salary up to £385 per annum, according to experience and qualifications.

Applications, stating age, qualifications, previous appointments and experience, accompanied by *copies* of two recent Testimonials, to be delivered to F. GREENHALGH, Esq., M.Inst.Gas E., Engineer and General Manager, Gas Offices, Greaves Street, Oldham, not later than Saturday, June 5, 1948.

EDWARD HAINES,
Town Clerk.

Town Hall,
Oldham.
May 5, 1948.

(Classified advertisements continued on Supplement 6)

APPOINTMENTS VACANT (ctd.)

WORKS MANAGER required for central Lancashire firm of tar distillers. Previous practical experience essential. Technical qualifications preferred but not essential. Apply No. 9729, "GAS JOURNAL," 11, Bolt Court, Fleet Street, London, E.C.4.

THE LIVERPOOL GAS COMPANY

ASSISTANT WORKS MANAGER.

THE Liverpool Gas Company invites applications from suitably qualified persons for the position of ASSISTANT WORKS MANAGER. Applicants should preferably be not more than 45 years of age and the initial salary will be according to training and experience but will not be less than £600 per annum.

The successful applicant will be required to pass the usual pre-employment medical examination and to contribute to the officials' superannuation fund.

Application should be made on the official form, obtainable only by writing in confidence to the General Manager, Radiant House, 18-26, Bold Street, Liverpool, 1, and should be returned so as to reach him before May 21, 1948. Envelopes should be marked "Ref. 55."

Public Relations Department.
May 3, 1948.

CITY OF COVENTRY
(GAS UNDERTAKING.)

DEPUTY INDUSTRIAL ENGINEER.

APPLICATIONS are invited from suitably qualified persons for the position of DEPUTY INDUSTRIAL ENGINEER. Applicants must be experienced in the general application of heat in industrial processes, be able to design burner equipment and capable of preparing working drawings relative thereto. Selling experience and ability to foresee potential industrial gas development is essential. The successful applicant will be responsible to the Industrial Gas Engineer for the operation of the industrial heat treatment shops and must have a sound knowledge of metallurgy.

Candidates should be qualified in Gas Engineering (Supply) of the Institution of Gas Engineers or have equivalent qualifications.

The salary will be A.P.T. Division, Grade IV, commencing at £480, rising, subject to satisfactory service, to £525 per annum.

The successful applicant will be required to pass satisfactorily a medical examination and to contribute on a statutory basis to the superannuation fund under the Superannuation Acts, as amended in regard to annuities to widows by the Coventry Corporation Act, 1936. He will also be required to contribute to the staff widows' and orphans' pension scheme. The appointment will be subject to three months' notice on either side.

Applications, stating age, experience, qualifications, &c., together with *copies* of two recent Testimonials, should be addressed to the undersigned so as to be received not later than Saturday, May 29, 1948.

JOHN E. WAKEFORD, M.B.E.,
Engineer and Manager.
Gas Department,
Gas Street,
Coventry.
May 7, 1948.

BOROUGH OF BEVERLEY
(GAS DEPARTMENT.)

TECHNICAL ASSISTANT.

APPLICATIONS are invited for the post of TECHNICAL ASSISTANT at a salary in accordance with Grade I of the A.P.T. Division of the National Scales (£390, rising by annual increments of £15 to £435).

The appointment is subject to the Local Government Superannuation Act, and the successful candidate will be required to pass a medical examination.

Applications, stating age, educational and professional qualifications and details of experience, with particular reference to chemical control of works, drawing office and distribution experience, accompanied by *copies* of three recent Testimonials, should be delivered to the undersigned not later than Monday, May 31st, endorsed "Technical Assistant Gas."

ROBERT PRESTON,
Town Clerk.
Municipal Offices,
Lairgate,
Beverley.

SENIOR GENERAL ENGINEERING DRAUGHTSMAN required with knowledge of gas and/or water works plant, with special reference to structural steel and reinforced concrete work, including the taking out of quantities and preparing of specifications. Salary £9 to £9 10s. according to experience. Applications, giving full particulars of age, training and qualifications, with *copies* of two recent Testimonials, to Engineer and General Manager, THE BOURNEMOUTH GAS AND WATER COMPANY, 136, Old Christchurch Road, Bournemouth.

APPLICATIONS are invited for the appointment of ENGINEERING SALES REPRESENTATIVE for South Wales and the West of England. Applicant with good practical knowledge of gas-works and chemical plant preferred. The appointment provides splendid opportunity for energetic man. Permanent appointment, generous superannuation scheme, car made available. Apply in writing, stating age, experience and salary required to the Personnel Officer, NEWTON CHAMBERS & CO., LTD., Thorncliffe, near Sheffield.

COUNTY BOROUGH OF ROCHDALE
(GAS DEPARTMENT.)

HOME SERVICE ADVISER.

APPLICATIONS are invited from qualified persons for the position of HOME SERVICE ADVISER. Applicants should have the diploma in Domestic Science or Institutional Management of some recognized college. The successful applicant will be required to organize and conduct cookery demonstrations and advise consumers in their homes on the use of all classes of domestic apparatus.

The salary paid will be in accordance with Miscellaneous Division, Grade I, of the National Scales (£315, rising to £360 per annum).

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Canvassing, directly or indirectly, will be a disqualification. Applicants must disclose whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating age, qualifications, present appointment if any, and experience, together with the names of two persons to whom reference can be made, should be sent to the Engineer and Manager, Gas-works, Dane Street, Rochdale, not later than May 24, 1948.

G. F. SIMMONDS,
Town Clerk.
Town Hall,
Rochdale.
May 3, 1948.

BRITISH GAS LIGHT COMPANY LIMITED
NORWICH STATION

TECHNICAL ASSISTANT.

APPLICATIONS are invited for the position of TECHNICAL ASSISTANT, required primarily to assist in the supervision and control of a number of small undertakings with outputs from eight million to 250 million cu.ft. per year. Applicants should not be more than 35 years of age and have thorough practical experience in the operation and control of small works and the control of labour. Preference would be given to applicants holding the Institution of Gas Engineers Higher Grade Certificate in Gas Engineering (Manufacture), and the successful candidate would be required to pass a medical examination by the Company's Medical Officer.

The commencing salary would depend on qualifications and would be not less than £450 per annum. The candidate appointed would be required to reside in Norwich and a house would be available rent free, if required.

Applications, giving age and full details of education, training and positions held, together with *copies* of three recent Testimonials, should be received by the undersigned not later than May 31, 1948.

R. A. WESTON,
Engineer and Manager.
Gas-works,
Bishop Bridge,
Norwich, Norfolk.

EXPERIENCED CLERK to take charge of accounts, residual sales, fittings, wages, collection, &c., for small group of companies. Apply, stating age, wage required, &c., to SECRETARY, Louth Group of Gas Companies, Thames Street, Louth.

THE Colchester Gas Company require a CARBONIZING SUPERINTENDENT to take charge of continuous vertical retort house and C.W.G. plants. Salary £400 per annum. Applications, stating age, experience and present engagement, should be sent to the undersigned.

Exempted from Control of Engagement Order.

MAURICE L. SMITH,
Engineer and Manager.
The Colchester Gas Company,
Gas-works,
Colchester, Essex.

BOROUGH OF STOCKTON-ON-TEES
(GAS DEPARTMENT.)

WANTED. Two fully-experienced GAS MAIN AND SERVICE LAYERS. Union conditions. Rate per hour 2s. 6½d. Corporation houses will be made available at usual rentals, and subsistance allowance of 24s. 6d. per week will be paid until this accommodation is available. Apply immediately, giving full details, to ENGINEER AND GENERAL MANAGER, Corporation Gas-works, Thompson Street, Stockton-on-Tees.

This advertisement is published by permission of the Ministry of Labour and National Service, under the Control of Engagement Order, 1947.

BARNSTAPLE GAS COMPANY

WORKS FOREMAN.

APPLICATIONS are invited for the above position. Wages £7 10s. with house and gas. Practical experience with control and maintenance of continuous verticals, automatically operated C.W.G. and benzole plants, also control and organisation of labour essential.

Applicants should have had a mechanical training, and be able to supervise the repairs and maintenance of all gas-works plant and machinery.

Applications, stating age, present position, training and experience, together with *copies* of two recent Testimonials should be forwarded to MANAGING DIRECTOR, Cross Street, Barnstaple.

This advertisement is published by permission of the Ministry of Labour and National Service under the Control of Engagement Order.

THE BRIDGWATER GAS LIGHT COMPANY

THE above Company requires a skilled GAS-WORKS MECHANIC (Maintenance Fitter) able to carry out fully the usual repairs to gas-works machinery and to be responsible for the maintenance in sound running order of all steam, gas or electrically driven plant.

The Company operates a co-partnership and contributory pension scheme open to permanent employees.

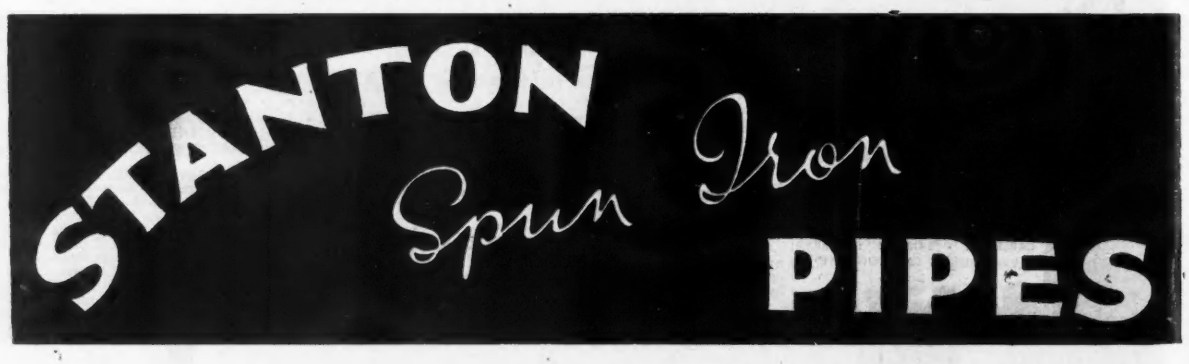
J.I.C. rates of pay and conditions. There are good prospects for a fully-qualified man, as the undertaking is rapidly growing.

Modern dwelling house available.

Applications, stating age, whether married or single, and giving short history of training and experience, should be sent to

THE MANAGER.
Gas Company Offices,
High Street,
Bridgwater,
Somerset.

This advertisement is published by permission of the Ministry of Labour and National Service, under the Control of Engagement Order, 1947. *The vacancy does not relate to any person who is normally engaged in agriculture or coalmining.*



THE IDEAL INDUSTRIAL METER

FOUNDED 1850
HOLMES
HUDDERSFIELD

GAS METER

FOR CAPACITIES UP TO 60,000 Cu.Ft. Per Hour.

Whether it's Cars or Cans, Biscuits or Bricks, whatever the Industry,
"B.M." Meters will be there measuring Gas for the Large Consumer.

To-day these meters handle a total capacity of 70,000,000,000 cu. ft. per annum.

"B.M." Meters are chosen for :

1. UNVARYING AND CONTINUED ACCURACY
2. ROBUST CONSTRUCTION
3. ADAPTABILITY TO HIGH PRESSURES
4. DEPENDABILITY

W. C. HOLMES & CO. LTD. TURNBRIDGE, HUDDERSFIELD

LONDON OFFICE • 119 VICTORIA ST., S.W.1 MIDLANDS OFFICE • 21 BENNETT'S HILL, BIRMINGHAM, 2

Telephones: Huddersfield 5280 : LONDON, Victoria 9971 : BIRMINGHAM, Midland 6830

C 254

"KEITH-BLACKMAN"

FANS *for every purpose*

for which fans can be employed profitably in or by the Gas Industry

VENTILATION

GAS BOOSTING and EXHAUSTING

FORGE and FURNACE BLAST

MAN-COOLING

WE make all types of Fans—"High Efficiency" for boosting or exhausting gas up to 3 lbs. p.s.i. and for volumes from 5,000 to 1,500,000 cfph; Cast Iron and Steel-plate "Pressure" fans for up to 2 lbs. p.s.i. air blast to furnaces, forges, water gas plants, burner equipment, etc; "Turbo" fans for applications requiring up to 6 lbs. p.s.i.; "Centrifugal" fans for draught on boiler fires to ensure economical steam production, or for cold air douche to workers in retort houses, etc.; "Centrifugal" or "Axial-flow" fans for supplying ventilating air through ductwork; "Propeller" fans for moving air in volume for ventilating; "Propeller" fans on portable structures for cooling workers at furnace fronts; and "Tenaxe" fans for re-circulating high temperature gases and air in various types of heat treatment furnaces.

WHEN you need fans for moving air or gases give us an opportunity of making practical suggestions.

HEATING

MECHANICAL DRAUGHT

FURNACE RE-CIRCULATING

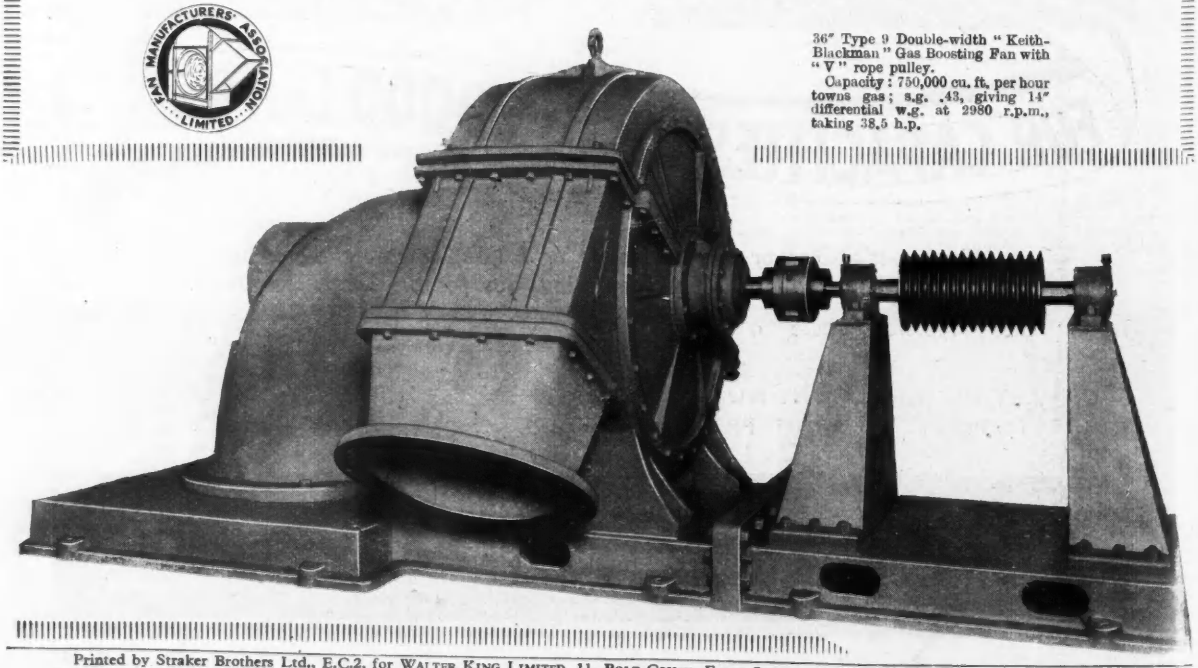
COLD AIR DOUCHE

DRYING

KEITH-BLACKMAN LTD
MILL MEAD ROAD, TOTTENHAM, LONDON, N.17.
TN: TOTtenham 4522. TA: "Keithblac Phone London."

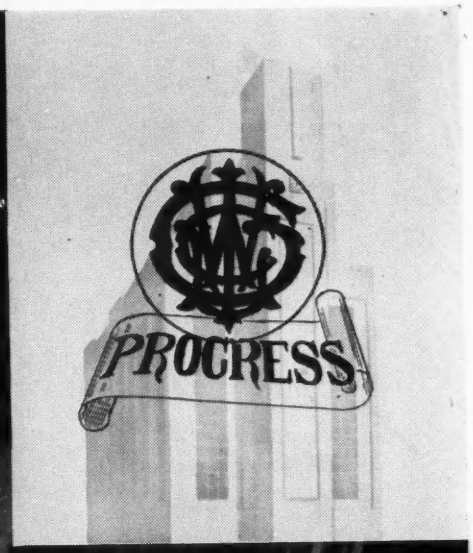
MANCHESTER, 4: 26 Corporation Street. Tel. No.: Blackfriars 4228. BIRMINGHAM, 2: 75 New Street. Tel. No.: Midland 0317-8.
LEEDS, 1: 40/41 Royal Exchange Chambers. TN: Leeds 27286. NEWCASTLE-ON-TYNE 1: 21 Mosley St. TN: Newcastle 22284.
SCOTLAND: 90 Mitchell Street, Glasgow, C1. TN: Central 7973. IRELAND: 7 Brunswick St. Belfast. TN: Belfast 21114.
SOUTH WALES: 127 Stanwell Road, Penarth, nr. Cardiff. TN: Penarth 249.

FAN MANUFACTURERS' ASSOCIATION LIMITED



36" Type 9 Double-width "Keith-Blackman" Gas Boosting Fan with "V" rope pulley.
Capacity: 750,000 cu. ft. per hour towns gas; s.g. .43, giving 14" differential w.g. at 2980 r.p.m., taking 38.5 h.p.

Printed by Straker Brothers Ltd., E.C.2, for WALTER KING LIMITED, 11, BOLT COURT, FLEET STREET, LONDON, E.C.4.—Wednesday, May 12, 1948.



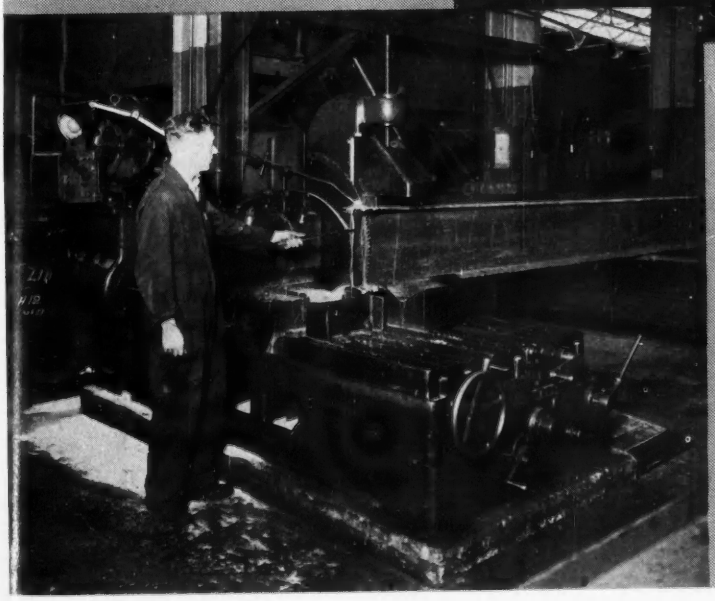
Structural Steelwork

for

GLOVER-WEST VERTICAL RETORTS

is fabricated in our own shops at

ALBION IRONWORKS MANCHESTER



WEST'S

GAS IMPROVEMENT CO. LTD.

Miles Platting

MANCHESTER 10

Telephone: COLlyhurst 2761-2-3-4-5

Telegrams: Stoker, Manchester

London Office:

COLUMBIA HOUSE, ALDWYCH, W.C. 2

Telephone: HOLborn 4108-9

Telegrams: Wesgasco, Estrand

C

"..... this brave army that struggled through its difficulties for six years"

Wellington's words in 1813 during the Peninsular War when paying tribute to his men. History repeats itself and today we again rely upon British Courage and resource.

WELLINGTON TUBE WORKS LTD

FOR STEEL TUBES AND STEEL TUBE FABRICATION

HEAD OFFICE & WORKS · GREAT BRIDGE · TIPTON · STAFFS